
discussion article

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Coins, money and exchange in the Roman world. A cultural-economic perspective *Joris Aarts*

Abstract

Until now, the Roman economy has been discussed primarily in economic terms. After the vehement debate between substantivist and formalists in the 1960s and 1970s, most historians and archaeologists have embraced an essentially substantivist perspective. Although this outlook has proven its value, it also seriously hampers a holistic view on the Roman exchange system by its focus on economic factors. Recent theoretical developments in economic anthropology, particularly through the work of Bloch and Parry, provide a model which is better suited to analysing the exchange system in its social, political and moral dimensions. It has been used successfully in recent publications of the exchange system in the ancient Greek world. In this article, its possibilities for the Roman exchange system and the role of money in it will be explored.

Keywords

Roman economy; exchange; coinage; monetization; cultural economics; moral economy

Introduction

I would like to start this paper with an apologetic note. I am not a theoretical archaeologist, nor do I pretend to master the entire field of discussion of which I want to present a part. I am just someone who is interested in the use and meaning of money in the Roman world, and currently slightly dissatisfied with the direction in which academic discussion on that topic is developing. My aim is to look critically at a few key texts of historians who have analysed the role of money in the Roman world and how this changed over time. The selected texts are in my view those which have exerted the most influence on thought about the function of Roman money and continue to do so at this moment. My argument will be that most historians until now have looked upon Roman money entirely in economic terms. Generally, they are familiar with the texts of Weber, Hasebroeck, Polanyi and Sahlins. More recent texts, like Kopytoff (1986), Appadurai (1986) and Bloch and Parry (1989) play no role of any importance in recent literature about the Roman economy. Although many historians seem to adopt the model of the embeddedness of the economy and take a substantivist view, the discussion seems to focus on money as an indicator for a monetary economy and the question of how this

changed over time. One of the central issues in this discussion is monetization, and I will use this as a reference point for the entire way in which discussion of Roman money and exchange takes place within (and without) the Roman Empire.

After this analysis, I will discuss an alternative approach offered by the work of Bloch and Parry. This cultural-economic perspective can be found in recent research on the topic of exchange in the Greek world, in which new directions have been explored successfully by von Reden (2003; 2002), Kurke (2002), Seaford (2004) and others. These researchers try to explain the emergence of money and its effects on Greek society in terms of changes in the moral, religious and political domain, mainly by elegant and clever reading of ancient texts and images. This broadens the scope in which ancient money can be contextualized and opens a whole new area of research subjects and methods. In my view, this cultural approach to exchange could be a powerful tool to analyse the entire repertoire of use of Roman money, potentially solving some seeming contradictions in analyses of the Roman economy and finally placing the discussion about money more firmly in the whole spectrum of exchange in the Roman world, where it belongs.

In the final part I will give some examples of how I think modern cultural economics can be applied to money in the Roman world. I will try to answer the question of whether – besides texts and iconography – possibly other forms of material evidence may be explored using this new perspective. As a numismatist I would be particularly interested in how far coin finds can be employed for new interpretations. I hope, in any case, that I will be able to convince the reader that this opens new and exciting paths in the research of the Roman economy and society.

Exchange and the nature of the ancient economy

First, it is necessary to stress that reflection on the use of money and monetization cannot be pursued separate from discussions about the nature of the ancient economy. Most people will agree that money is first and foremost a means of exchange, facilitating the exchange of other objects and sometimes being the object of exchange itself. The way in which historians have regarded exchange in the ancient world is very much coloured by their view of the character of the ancient economy in general. Therefore I will start with a brief historical overview of the debate.

From the beginnings of neo-classical economic theory in the late 19th century, people have used an evolutionist perspective on the modern Western economy, the latter being regarded as the end situation in a series of different stages of economic development or behaviour. In fact, most authors writing about economics in general have expressed their opinion on the character of the ancient economy and how, or indeed if, it was structurally different from modern capitalist economies. The first half of the 20th century was dominated by what we now call the modernist perspective, of which Rostovzef (1957) can perhaps be regarded as the most famous advocate. For the modernist, differences between the ancient economy and the modern Western capitalist economies were more a matter of scale than of quality, and consequently the ancient economy was analysed using the same theories and models as

were applied to modern economies. Essentially the ancient economy was seen as a low-level market economy. The concept of a market economy is not exactly defined, but usually contains the idea that all markets in the ancient world were somehow interlinked by supply and demand, which can, among other things, be traced by the relation between prices of goods and services throughout the Roman Empire. A very recent example of this perspective is Temin's (2001) article 'A market economy in the early Roman Empire', in which it is claimed that a market economy existed in the early Roman Empire.

A radically different view was expressed in Karl Polanyi's publication *Trade and market in the early empires* (1957), which started a very hot debate between economists, economic anthropologists and historians about the character of the ancient economy, known as the formalist–substantivist controversy (see Hodges 1988; Wilk 1996; and Meikle 2002). This dispute was really an economic translation of a much older one, underlying the social sciences. As Wilk (1996, 5–6) puts it,

A *relativist* argues that cultures are so different from one another, especially primitives from moderns, that they cannot be understood with the tools of Western science, tools that are fundamentally modern. A *universalist* says, on the contrary, that all human experience is fundamentally the same and can be understood using objective tools that are universal. To the *universalist*, science is not bound by a single culture and therefore can make general comparative statements.

The substantivists rejected the formalist (or modernist) view that the ancient economy was essentially the same as modern Western ones; Polanyi introduced instead the idea of the 'embedded economy', in which economic behaviour was not primarily inspired by rational and optimizing principles (postulated as endemic to human nature by the formalists), but could be better understood as being regulated by the social structures of the society under study. He uses the term 'embedded economy' for capitalist economies; in those, the economy is embedded in the institution of the marketplace. Later, the same term is used by many authors to refer to embeddedness in social institutions only. He distinguished three main forms by which all societies integrate their economies: reciprocity, redistribution and (market) exchange. A combination of these forms can be found in all societies, but in each of them only one is dominant. In fact, this idea divided the object of study into two categories: modern Western capitalism, which is dominated by market exchange, and premodern societies, in which one of the two other forms are the organizing principle. The view of Polanyi is a substantivist one, but includes an evolutionary standpoint. Societies can be grouped historically by a development from less complex forms of exchange to the complexity of the marketplace. This evolutionism can also be found in the work of two other substantivists, George Dalton and Marshall Sahlins. In societies which used reciprocity as the dominant form, gift exchange and barter were seen as the main integrating principles; Dalton (1977) introduced the term 'primitive valuables' to denote the prestige gifts which were exchanged in a ceremonial

way. The circulation of these goods was strictly separated from that of more mundane goods, like foodstuffs and other necessities of life. Hence another concept was introduced, namely 'spheres of exchange', to distinguish between the different domains in which goods were exchanged in these societies, and between ceremonial exchange of gifts and barter. Ceremonial exchange was, furthermore, linked with the power structures within these societies; prestige objects and the networks of exchange were monopolized by the leaders and their followers. Archaeological examples of social-economic analyses which used these models derived from economic anthropology can be found in the 1980s studies of Haselgrove (1987), Nash (1978; 1981) and Roymans (1990) of Iron Age tribal societies in north-western Europe.

Finley's *The ancient economy* (1973) has become the most influential text in the debate about the nature of the Roman economy. Much has already been said about this book, so I will only mention what is essential for our discussion. Finley adopts the substantivist view of the Roman economy, using the theoretical assumption of Weber, Hasebroeck and Polanyi that, since there was no conceptual grasp of what we regard as the economy, it would be an anachronism to extend the rational and calculating behaviour displayed in modern capitalist economies to ancient society. Therefore the ancient economy cannot be analysed using economic models which presuppose such an awareness of market principles and optimization.

The reason why I have mentioned the discussion between formalists and substantivists is because it is still influencing current thought about the ancient economy, as Wilks's statement above makes clear. Some authors have bluntly stated that the debate is now obsolete, that it is entirely possible to combine the two perspectives in one model of the economy; some elements are better described by modernist laws and models, others can be read more clearly with the spectacles of a substantivist. Some authors maintain that modernism has been eliminated from the scene, although they admit that it sometimes still grows new heads. The controversy between formalists and substantivists may indeed have become irrelevant, and I am inclined to regard (with Hodges 1988) a combination of perspectives as the most rewarding approach. However, I do not think that the underlying disparity has been solved; people still argue about the rationality behind economic behaviour, and try to find a balance between cultural particularism and human universalism to explain why one set of actors makes one choice and another set another, the circumstances being roughly equal. An example taken from current discussions in Dutch archaeology shows how the differences between the agrarian economy of the sandy soils at the Rhine frontier and the more southern loess zones are explained as based on rational economic choices on the one side and cultural choices on the other (Figure 1). The discussion is about the development of a 'Roman' villa mode of production on the loess soils, and the lack of it on the sandy soils to the north. The Roman villa is not an unproblematic category; there is a fundamental dualism in its archaeological meaning. On the one hand, archaeologists tend to focus on the physical occurrence of elements associated with the Roman villa; if, however, a functionalist definition of the villa is used – an agrarian settlement producing for a (monetized) urban market – it is possible that sites which do

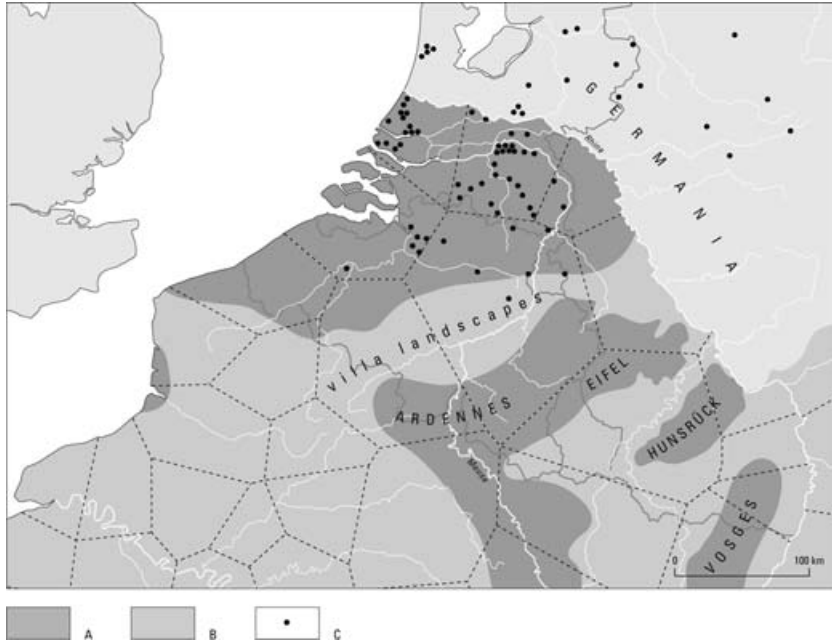


Figure 1 Map of villa and non-villa landscapes in northern Gaul and the Rhineland in the 2nd century A.D. (Roymans 1996, 62, Figure 18). A: non-villa landscapes; B: villa-dominated landscapes; C: sites with native farmhouses of the north-west European type.

not conform to the physical appearance of the Roman villa can be interpreted as such by the way they functioned in a local or regional economy. Roymans offers two levels of explanation: one is social-economic: ‘the limited potential of the landscapes for large-scale cereal production, the laborious development of urban centres’, and the other cultural–ideological: ‘adherence to a more traditional social organisation of production...adherence to martial and pastoral values...is central. This was the reason why the native population (particularly the elite) was less receptive to the cultural values of *romanitas* and the villa system associated with it’ (Roymans 1996, 73). Here we see how both types of explanation can be successfully combined to produce a balanced view of social-economic structure.

Money, monetization and ancient history

One of the first to adopt the substantivist perspective regarding the Roman economy was Crawford (1970), even before Finley’s seminal work. In his article ‘Money and exchange in the Roman world’ he tries to answer the question of the extent to which coined money served as a means of exchange in the Roman world. Crawford uses Polanyi’s definition of money: standardized, portable goods for payment, the storage and accumulation of wealth, a measure of value and a medium for exchange of goods. The latter function of money he considers the most important. By ‘exchange’ Crawford means the commercial transactions of the marketplace, i.e. market exchange. To

function adequately as a means of exchange, a coinage system must be stable and it must have a wide range of denominations, 'For a coinage-system which is only suitable for major transactions such as buying a house or paying over a dowry can hardly be regarded as a widely useful means of exchange' (Crawford 1970, 41). This shows that Crawford presupposes that a coinage can only be employed successfully as a means of exchange if it is suitable for all (commercial) transactions. Although he does not exclude gift exchange or any other type of ceremonial and ritual exchange, he ignores it completely in his discussion of Roman money.

According to Crawford, the Roman coinage system (200 B.C.–A.D. 200) meets the requirements of stability and wide denomination range. He suggests that coins were only used as general purpose money (although he never uses this term) inside the cities of the Mediterranean, although he stresses the fact that they were by no means dependent on this monetary economy. Coinage was not issued by the government to facilitate exchange in general; it served only the purpose of making state payments easier. The development of a monetary economy in the cities was just a by-product of this function. Outside these cities, and indeed in other parts of the empire, money was not a common means of exchange. To make his point, Crawford uses both ancient texts and archaeological evidence; in this case, the coin finds of Pompeii (Breglia 1950), rural villas in Italy and the hoards of Belgium, of which an important part had already been made available in the study of Thirion (1967). There are a few things that must be said about Crawford's article. In the first place, the picture he sketches is static; there is no room for processes of change in his model. I presume Crawford did not mean that the role of money in the Roman economy stays essentially the same during the 400 years about which he writes, but he does not add much time-depth to what he says. In the second place, time has completely falsified his ideas about the nature of coin finds in the countryside and in the north-western provinces. Not only has a staggering amount of Roman coin been found (and published on) in rural areas all over the empire since 1970, but it is certainly not so that the denominations in rural areas are biased towards higher denominations, which is one of his arguments for the lack of a monetary economy outside the cities and in the non-Mediterranean areas. But this is not the place to criticize Crawford's model, and it would indeed be unfair to do so from the vantage point of data which were not available to him. What is the point, however, is that his urban–rural opposition between monetary and non-monetary exchange is still hovering in the background of more recent texts about the role of money in the Roman economy. I will return to this later.

I will not spend much time on the already much-discussed book of Finley, which was first published three years after the article of Crawford. He does not elaborate much on the theme of money, either in the original edition or in the additional comments in the edition of 1983, where he replies to the criticism of his work since then. Basically, he denies a fiduciary role for Roman money, 'which is different from base metal circulating at conventional values, as tokens' (Finley 1992, 196) and, in the same vein, he maintains that the ancient world did not have any means to create credit, which means it was unable to create money not backed up by gold and silver through tokens like negotiable

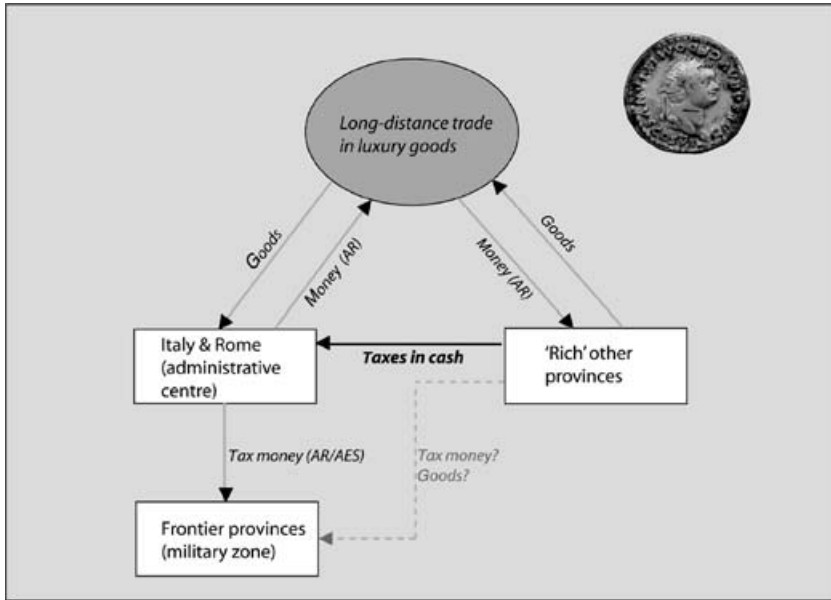


Figure 2 Schematic view of Hopkins's model of taxes and trade. AR = silver coins; AES = bronze coins.

paper. The last statement is primarily based on the fact that there was no such thing as a public debt. His main point is that, this being the case, ancient moneylending could not be turned to productive use, and therefore had no effect on economic growth. In this he reacts to the 'anti-primitivist attacks' on his position by Andraeu (1977) and Thompson (1982), who – in the opinion of Finley – take the opposite view (Andraeu in his analysis of banking in the Roman world; Thompson writing about Athenian finance).¹ Finley's only interest in money is to prove his point that the absence of fiduciary money and the impossibility of creating credit forestalled any possibility for the ancient economy to develop into the market economy postulated by the modernists. He does not really go into the subject of a developing monetary economy, limited as it may have been, like Crawford did and, a few years later, Keith Hopkins (1980).

Crawford remarks that, 'for the civilian population, both in Germany and Belgium, coinage will have served mainly as a store of wealth and as a (compulsory) method of paying taxes' (Crawford 1970, 45). Through his lack of a diachronic perspective, however, he did not see any 'multiplying' effect emanating from the fact that people, to pay their taxes, had to earn money to pay in the first place. This was one of the central theses of Hopkins's article 'Taxes and trade' (1980), which has had a vast influence on current thought about the (monetary) economy in the Roman world. He makes a distinction between rich, tax-exporting provinces and relatively poor, tax-importing ones (Figure 2). The latter are both frontier provinces, with a strong military presence, and the centre of the empire, because central authorities

consume a great deal of resources. Since the tax-exporting provinces were forced to pay an important part of their taxes in cash, they had to earn money by exporting goods of equal value. Thus taxes paid in cash created a money flow from the rich provinces to the centre and the frontiers of the empire. Also, it stimulated long-distance trade and had the effect that the provinces became more and more integrated into a monetary economy. One of the arguments used by Hopkins for this integration is the chronological distribution of Roman *denarii*, which show the same patterns in all parts of the empire. Hopkins's article features two important new elements. In the first place, it gives substance to the possibility for economic growth, and thus abandons the stagnation model of Finley. In the second place, he does not look upon the Roman economy as a static whole, like Crawford did, but sees a development which he describes in terms of processes of integration. In Hopkins's model the use of money increases both quantitatively and qualitatively in the course of the Roman era through taxes and trade.

It is not easy to criticize Hopkins, particularly because he refines his general theory in his 'qualifications'. For instance, he describes the monetary economy of the Roman Empire as a 'thin veneer of sophistication spread over and tied to the subsistence economy' (Hopkins 1980, 104). In this sense, he remains faithful to the primitivist outlook of Finley. Still, he allows for a great deal more economic growth than Finley does. At the same time, the notion of monetization as an ongoing process also adds an evolutionistic element to his model: native societies develop from pre-monetary towards monetized exchange by their integration into the Roman Empire (although they might never attain it). With this, Hopkins places monetization on the same level as Romanization.

Duncan-Jones can perhaps be seen as Hopkins's most important critic. In his book (Duncan-Jones 1992) he attacks the weakest point of Hopkins's model: the assumption that taxes had to be paid in cash. With a number of examples from literary sources, Duncan-Jones shows that in many places taxes continued to be paid in kind, mainly because of the limited availability of coined money. Cash payments of taxes particularly occurred in regions in which a monetary economy already existed (the cities in the east, for example). This removes the most important stimulus of monetization from Hopkins's model. Also the distribution of *denarii*, which supported Hopkins's thesis, is disputed by Duncan-Jones; according to him, the similarities in the chronological distribution of *denarii* between regions are superficial, and a more detailed analysis reveals huge differences. Duncan-Jones concludes that provincial economies remain relatively isolated, and that there was little economic integration at empire level. When money entered a certain province, it would hardly leave again; the Roman authorities had no effective strategy to regain the coined money. Although Duncan-Jones shows that taxes in kind existed alongside money taxes, and thereby questions the complementary interaction between taxation and long-distance trade which triggers the monetization of the economy, his view does not really offer an alternative. Because he is not able to quantify the relation between taxes in kind and in money, he does not really differ from Hopkins's view of a 'thin veneer of sophistication'. Moreover, his discussion reads as a return to the stagnation

theory of Finley. Aside from the question of which model fits the data best, it is clear that Duncan-Jones does not have a different perception of the concept of monetization or of the way Roman money was used. He too focuses on the function of money in commercial exchange, with little consideration of other types of use.

Although various authors have produced important texts which continue the discussion about monetization and the role of money in the Roman economy, the parameters of the discussion did not really change after Duncan-Jones. All authors seem to imply monetization to mean how far money was used for commercial exchange, on what scale this took place, and if this monetized exchange increased under the influence of the integration of the Roman economy. They all more or less agree about what matters in the discussion, and the main question becomes one of the relative importance of the elements deemed relevant (taxation in money v. taxation in kind, the balance between coined money and credit, regionality v. empire-wide economy); thus the answers are sought in quantification (see De Blois 2002 for the latest contributions to this debate). Although Howgego in his article (1992) explains the limits of quantification in terms of the nature of the sources, he still tries to quantify the metal supply, how much of it was used for money and in what form (coins or bullion), and the impact of credit: 'the infrastructure for a monetary economy relied upon the availability of coin, and is in itself evidence for such availability, although the use of credit may have gone some way towards ironing out temporary inadequacies' (Howgego 1992, 18). An important part of Howgego's text is devoted to Crawford's idea that monetization was limited to the (Mediterranean) cities of the empire. Although he uses a host of new evidence to show that Crawford was being too pessimistic about the level of monetization of the countryside, Howgego's conclusion is that the Roman world

was one in which money was the *normal* form of exchange of goods, at least in the towns, but money use was relatively unsophisticated The use of money for taxation, rents, wages and credit shows how money use was embedded in the structure of the economy, but the use of kind alongside money in all these areas acted as a brake on the level of monetization of the Roman world (Howgego 1992, 29; added emphasis).

All in all, all texts regarding the role of money in the Roman economy are confined to the same themes as in the above quotation, and are written from a traditional economic perspective, albeit with a basically substantivist attitude towards the character of the Roman economy. One exception is Temin's (2001) article, mentioned above, which seems to return to a more modernist view.

All authors are mainly interested in the question of how far money was used for commercial exchange and to what extent we can speak of a monetized economy in the Roman Empire. Other forms of exchange are acknowledged, but not really discussed. The possible functions of money in social or ritual exchange are neglected. There is a predominant interest in hard figures, since the main problem is seen as a quantitative one: how many transactions were

pre-monetary		monetary
reciprocity		market exchange
embedded in the social structure		embedded in the market
native		Roman
countryside		city
outlying provinces; frontier provinces	centre of the empire/Mediterranean provinces	
lower social classes		higher social classes

Figure 3 The binary oppositions underlying the debate about the Roman economy.

actually conducted in money, how many in kind, how large was the role of credit and non-monetary forms of wealth (bullion), what was the impact of long-distance trade and production or distribution of bulk goods? The desired outcome of this quest for numbers seems to be an answer to the question about the nature of the Roman economy and whether it was capable of growth. The hidden evolutionism in most historic models causes the Roman economy to be described in opposites (Figure 3). In this perspective, all societies, including the Roman Empire, develop from pre-monetary to money-using societies. The hidden end phase and anchor point is the capitalist modern Western world, which is fully monetized. Although the modernist–primitivist controversy is no longer seen as relevant by many, the fact remains that the ancient economy is still being compared – albeit inexplicitly – with the modern Western economy. The tension between the two perspectives remains an issue, as Scott Meikle puts it in his article about modernism (2002): ‘the use of economic terms, even in their use-value senses when they have them, constantly invites the assimilation of ancient behaviour and mentality to modern market behaviour and mentality’ (Meikle 2002, 248–49). If the ‘natural’ development from pre-monetary to monetized society is hampered in any way, this is commonly interpreted as a failure to integrate the economy, or as a stagnation of the economy. ‘Roman society’ (in the narrow sense of the word) is seen as a monetary one, although it is disputed as to how far this monetized economy was confined to the cities. The native societies of the north-west are regarded as pre-monetary (although they may be coin-using), with an exchange system based on reciprocity and an economy which is embedded in the social structure. However, no one explicitly describes this starting position when monetization processes or economic integration in the Roman period are discussed. The model of Hopkins in the monetization debate is still very much prevalent, and criticism seems to be limited to its quantitative, not its qualitative, aspects. Monetization is perceived as one of the aspects of Romanization.

I have shown in an earlier article (Aarts 2003) that these oppositions are not real, or at the least can put us on the wrong foot. The Batavians, a people living in the Dutch river area on the fringe of the empire (Figure 4), were

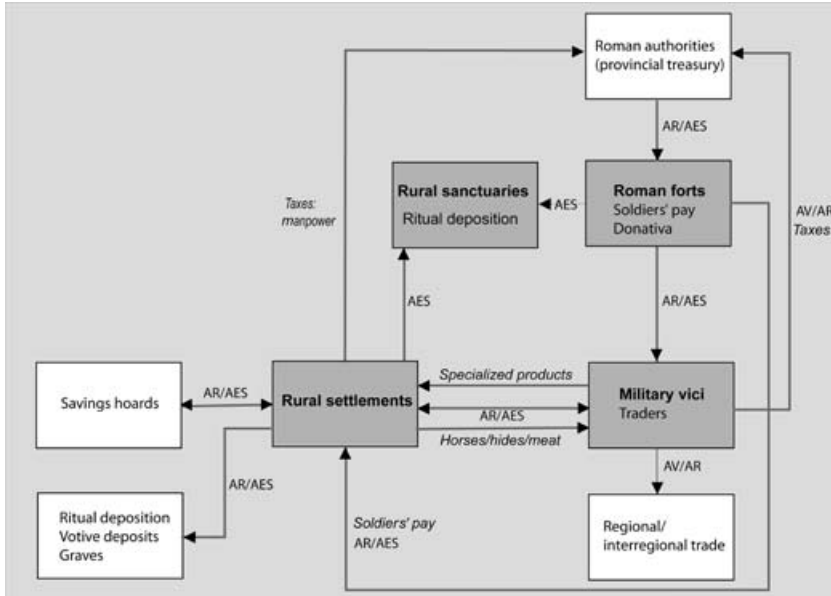


Figure 4 Coin flow in the Batavian area before A.D. 70 (Aarts 2003, 180, Figure 11). AV = gold coins; AR = silver coins; AES = bronze coins.

a mixture of the remains of an earlier people (the Eburones) and a split off section of the trans-Rhenian Chatti, who were probably invited by the Roman authorities to live in the frontier zone of the Roman Empire (Roymans 2004). They were a *gens foederata* (a people with a treaty); we do not know the exact contents of this treaty, but Tacitus tells us that the Batavi were exempt from paying taxes but had to provide troops for the Roman army. Vossen (2003) has calculated that at least one male member of each Batavian family served in the Roman army. The Chatti used gold coins (of the *triquetrum* type, see Roymans 2004), but not as general purpose money or for market exchange. Based on an analysis of the Roman coin finds of the Batavian area, I have shown that Roman money was distributed quickly and early (probably starting somewhere in the mid-Augustan period), and turned up in virtually every early Roman settlement. There is no difference between the central place (Nijmegen, or Batavodurum) and the rural sites, nor is there a time lag between the coins found in early forts and the countryside. Through the massive service of Batavians in the Roman army, both the coins themselves and the ideas about how to use them were spread by Batavian soldiers who served in their own tribal territory. Most of the early Roman coins which were found in the rural settlements are unlikely to have been lost during monetary exchange. More probably they were soldier's pay, brought home by Batavian soldiers on leave. When the coins arrived in these settlements, they became part of hoards, or were used for ritual and ceremonial purposes, such as the offering of coins in temples or other ritual places. They could also be brought back into circulation and used for market exchange, but only in places which

featured a monetary exchange system, i.e. in the *civitas* capital, the forts and the *vici* adjacent to the forts. What is important to note here is that they were being used by the same people, but for different purposes in different contexts. In this, the difference between Roman and native was non-existent: Batavians were Roman soldiers, and knew how to use coins in a monetary way. They could use them in everyday transactions or market exchange in the context of the fort or the *vici*, but just as well throw them in a pool or a river as a ritual sacrifice. When they used coins for market exchange, they acted in precisely the same way as the people in the city of Rome (as they did, for that matter, when they used coins for ritual purposes). To conclude, the example of the Batavians shows clearly that the binary oppositions of the above table do not provide us with an adequate model for the description of processes of monetization. What is at issue is not the place where the coins were used, but the context in which they were used. The coins themselves could be used at different moments in time for different purposes, now acting as money in market exchange, then as votive objects in a ritual setting. In fact, the life of Roman coins can better be described in terms of a social history of a class of object as suggested by Appadurai (1986).² Monetary use of coins represents – according to Appadurai’s model – only one stage in the lifespan of Roman coins, and this puts the subject of monetization firmly into perspective. A description of monetization that only concerns the use of Roman money for market exchange is not sufficient to describe all the changes in the exchange system brought about when Roman coins were introduced in the societies which became part of the Roman Empire. In other words, when talking about the function and use of Roman coins, we should look at their role in the whole system of exchange, not only at one part of it. It is clear that the tools to do so are not provided by historians. For this, we have to look at developments in economic anthropology, particularly those of the last 15 years.

Economic anthropology. The model of Bloch and Parry

In their introduction to *Money and the morality of exchange* (1989), Bloch and Parry show that there are more ways to analyse the meaning of money than we have discussed above:

the meanings with which money is invested are quite as much a product of the cultural matrix into which it is incorporated as of the economic functions it performs as a means of exchange, unit of account, store of value, and so on. It is therefore impossible to predict its symbolic meanings from these functions alone . . . (Bloch and Parry 1989, 21).

Their perspective is a mix between universalism and cultural relativism. On the one hand, they argue that money means ‘different things in different cultures’, but also that it ‘may mean different things within the same culture’. Moreover, the meaning of money ‘is not only situationally defined but also constantly re-negotiated’ (Bloch and Parry 1989, 22–23). On the other hand, they claim that in most societies two different spheres or cycles of exchange exist. One is focused on the short term, and can be characterized as exchange

in the domain of the individual, where social relations play a limited part, and where acquisition is paramount. This form of exchange occurs mostly between independent actors or strangers. The second sphere is that of the long term and is about reproduction of the social and cosmic order. This is the domain of social structure which surpasses the individual. Although both spheres represent two principally separated transactional orders, they are at the same time related. This articulation is often charged with a moral tension. The morally undefined short-term cycle is often regarded as subordinate to the long-term cycle, which is 'positively associated with the central precepts of morality' (Bloch and Parry 1989, 26); the two spheres must be kept separate because the goals and aims of the individual can threaten the benefit of the community. But at the same time, the long-term cycle cannot exist without the agency of individuals and the commercial transactions associated with it. For example, a company which makes a large donation to the World Wildlife Fund (let us assume that the activities of the Fund belong in the long-term cycle) has to earn this money first in the short-term sphere. Therefore money has to be converted from the short-term to the long-term cycle, and in most cases this conversion is performed ritually. This conversion is very important; if individual acquisition in the short-term sphere becomes a goal in itself and does not serve the larger purpose of sustaining the long-term-cycle, this is considered amoral and antisocial. The reverse process, conversion from the long-term to the short-term cycle, does also take place, but Bloch and Parry point out that this is not common; it only occurs in emergencies, such as famine.

The model of Bloch and Parry is much better suited than the models discussed so far to analysing the functions and meanings of money in Roman, or indeed any, society. It shows that the role of Roman money has been described primarily in terms of the short-term exchange cycle. This does not do justice to the many other functions and meanings money may have had. Particularly if one accepts the idea that the meaning of a coin can undergo several changes during its life and that the social context of use determined its function, the short-sightedness of a purely economic perspective becomes very clear. Practically speaking, many coin finds may not represent ancient loss as a by-product of market exchange; rather, the coins may have been deposited ritually or were 'frozen' in a morally neutral zone between the spheres. By this last remark I mean that when coins are hoarded, they are strictly speaking not part of any exchange cycle. In fact, in this state they have the potential to enter into either the short-term or the long-term cycle.³

What the model also offers is a broader perspective on money as only one class of object circulating within a complete exchange system. It prevents money from becoming an academic fetish, whereby money is invested with an intrinsic power to radically change the social or cognitive structures of a society. Rather, the opposite is the case: the cultural context bestows meaning on money. The way in which money is symbolically represented reflects the way in which the actors view their world. This in itself is another argument for not isolating money from the entire system of exchange.

Finally, the model is better equipped to explain change without the risk of a deterministic evolutionism; change is defined by a shifting pattern in the ways

the two spheres articulate with each other and not as the progression from one mode of exchange to another, as in the economic-historic model. The latter simply assumes that market exchange takes over from earlier reciprocal forms of exchange in the course of the Roman period, and does so successfully or not. It does not do justice to other modes of exchange which continued to exist during the entire Roman era.

Money and the moral human. The Greek world

In the 1980s cultural economics simultaneously entered the academic discussion of both Iron Age societies in Gaul and Greek society in the archaic period. Both were regarded as non-monetary (although coin-using) societies, and in both fields gift exchange and the circulation of (primitive) valuables in particular were explored, using the theoretical framework of economic anthropologists like Polanyi, Sahlin, Mauss and others. The idea of different spheres of exchange, each with its own function, social significance and distinct material culture, was quickly adopted. For the Greek world, literary texts played an important role; there have been many studies of the gift exchange in Homer (for instance Scheid-Tissinier 1994; Crielaard 2003). For Iron Age societies in Gaul, however, analysis of the exchange system was rather based on material culture, as in the work of Haselgrove (1987), Nash (1978) and Roymans (1990), which was among other things the effect of the scarcity of written sources. Another difference between academic discourse in the two fields was the fact that coinage was ‘invented’ by the Greeks, which resulted in the view that money transformed Greek society, while the adoption of coinage by Iron Age Celtic societies was described in more neutral terms. All of the authors were then firmly rooted in the substantivist perspective, and all agreed that the economy was embedded in the social structures of those societies. I will not elaborate further on these earlier texts (see von Reden 2003), but concentrate on more recent developments in the discussion of the Greek exchange system, because the models of Kopytoff, Appadurai and Bloch and Parry seem to have gained more ground here, and because Greek money plays a crucial role in the debate. The texts I will briefly discuss are produced by only a small group of authors.

First, Leslie Kurke associates the invention and increasing use of Greek money with the rise of the *polis* and the parallel shift of social–political power from aristocracy to the democratic city state (Kurke 1995; 1999; 2002). She contrasts the non-embedded exchange of the marketplace (in the *polis*) and the use of coined money with the embedded gift exchange of aristocracy. In her view, money was used by the rising *polis* to wrest power away from the aristocratic elite. Thus coins competed with the aristocratic value system, in which the exchange of precious metal played an important role. To do so, it had to articulate in some way with this value system, and this is why coins were first made of precious metals, but were stamped with the symbol of the authority of the city state:

Coinage was adopted from the East . . . by the Greek cities in the period 550–525 BC at least partly as a political token, a means of asserting the city’s authority to constitute and control regimes of value . . . not just in relation

to outside – other cities with their own coinages – but also in relation to an elite that had traditionally controlled the highest material and symbolic values through the para-political order of gift exchange (Kurke 2002, 92).

The resistance of the aristocracy lay in the association of coins with the amoral and debasing retail trade of the *agora* that can be found in literary texts of that time (which of course conveyed the perspective of the elite). Significantly, coinage itself did not play a prominent role in these texts; it was more that the activities which belonged to the same (short-term) cycle of exchange were denounced as morally unsound, and coins were damned by proxy. Kurke mentions the simultaneous ‘invention’ of the lower-class prostitute (*porne*) and her aristocratic counterpart (*hetaire*), at the same time that coinage was introduced, to illustrate the contention between the elitist and the ‘middling’ tradition in defining the boundaries of the transactional orders. Another example is the contrast between elite games and the demotic games of chance, the latter representing the goal of personal gain and the former the reproduction of (aristocratic) values. When coins are mentioned at all, for instance in sympotic poetry, they are mostly represented as a counterfeit of the *kakoi* (literally ‘the bad ones’, meaning the anti-elite), as opposed to the gifts of refined gold of the aristocracy. In the terms of Bloch and Parry, coinage plays a central role in the redefinition and balance between the two transactional orders in Greece of the 6th and 5th centuries B.C., the new symbol of the long-term cycle being the community that constitutes the *polis* itself (Kurke 2002, 94). A good example of this redefinition of the long-term cycle used by Kurke is the public investment by the *polis* of Athens of the newly discovered silver in Laureion in building and maintaining a large fleet. Themistocles, who is portrayed as the initiator of the project, is depicted as someone acting out of private greed and corruption in the texts of Herodotus. The initiative of Themistocles is clearly discredited as exceeding the moral boundaries of the short-term cycle.

Seaford is more preoccupied with the effects of the invention of coinage on the Greek mind (in particular see Seaford 2004) and less concerned with its symbolic meaning in the political arena. His argument is that the rapid monetization of Greek *poleis* created important preconditions for the genesis of pre-Socratic philosophy and tragedy: ‘presocratic metaphysics involves (without consisting of) unconscious cosmological projection of the universal power and universal exchangeability of the abstract substance of money’ (Seaford 2004, 11).

The adoption of coinage by the Greeks and monetization itself was an effect of the ‘failure of centralized reciprocity (redistribution) and the idealization of communal sacrificial distribution’ (Seaford 2004, 10). The first is illustrated by passages from the *Iliad* and the *Odyssey*, where the unbalanced gift exchange between Diomedes and Claucus (which is expressed as an uneven exchange value, namely the number of cattle of both exchanged objects’ worth), the conflict over Briseis between Achilles and Agamemnon (which is about the transgression of the traditional boundaries of the redistribution of booty) and the feasting of the suitors in the home of Odysseus (another distortion of redistribution) are interpreted as the breakdown of the reciprocal

values of traditional gift exchange, to be replaced by the exchange values which belong to the realm of trade. With the second precondition for the monetization of the Greek world, which Seaford sees as related to the first, he refers to the communal nature of Greek animal sacrifice, where meat is evenly distributed over all members of the group. This egalitarian ritual is represented by Seaford as crucial to the acceptance of money:

the Greek animal sacrifice involves reciprocity (something in return may be expected from the deity) and redistribution (meat brought to the god is eaten by all), but also the horizontal relation of egalitarian communality between the participants: there must be equal shares for all. It was this traditional, sanctified equality that we saw as a factor in that communal confidence in multiple symbols of identical value that is a prerequisite for the communal adoption of coinage (Seaford 2004, 294).

Cosmology in pre-Socratic philosophy is a symbolic translation of the representations of money into the long-term cycle. Conversely, although money is used in the short-term cycle of trade, 'it acquires some of its unique effectiveness from the long-term order (sacrifice)' (Seaford 2004, 14). The isolation of the individual, alienated from those closest to him and embodied by the tyrant who abuses the sacred and measures everything in money, lies, according to Seaford, at the heart of Greek tragedy. This is the symbolic representation of the moral tension between the two transactional spheres, where the individual exceeds the boundaries of the short-term cycle by negating its purpose of the long-term order. It is the impersonal unlimited nature of money which creates this morally dangerous state, and again the creation of Greek tragedy would be unimaginable without these representations of money.

I suspect that the representations of money in the Greek world are more an expression of an underlying current which was responsible for both the development of new cognitive structures in Greek thought and the emergence of money. Seaford comes dangerously close to the fetishism of money described by Bloch and Parry as one of the main features of Western discourse of money: 'but what all these different strands in our cultural tradition appear to agree about is that . . . money acts as an incredibly powerful agent of profound social and cultural transformations' (Bloch and Parry 1989, 3). Close, but not quite there: it would be wrong to reduce Seaford's well-balanced argument to the idea that money alone was responsible for the invention of tragedy and philosophy. The value of Seaford's view lies in the way he links ancient texts with the history of the articulation between the two transactional spheres, thus providing new perspectives on what money meant in Greek society.

It is impossible to discuss the excellent book of Sitta von Reden on *Exchange in ancient Greece* (2003) in its entirety. She demonstrates an ability to integrate the whole exchange system of ancient Greece in one perspective, using ancient texts as well as images on vases. Conceptually, she is closer to Kurke than to Seaford, in the sense that the impact of money on the transformation of exchange and the political values of the *polis* is one of

the central themes in her book. She starts, however, with a discussion of the negotiability of the two transactional spheres in Homer. The exchange behaviour which Odysseus displays is dependent on the role he assumes and the context in which he acts. As such, he can engage in gift exchange as a hero, partake in reciprocal exchange for subsistence and strive for personal gain in the company of strangers. Von Reden argues that Homer's epic is illustrative of the dialectic of the 8th-century Ionian Greeks with their past. Ionia in the 8th century was a society in which power shifted from ritual to political institutions, which transformed the nature of gift exchange: 'Homeric epic raises the question whether gift exchange has social, political or metaphysical meaning' (von Reden 2003, 17). On the one hand the traditional values of gift exchange are expressed through a hero cult, but at the same time Homer 'dismisses gifts as tokens of recognition between living members of oikos and polis' (von Reden 2003, 36). One section of von Reden's book is devoted to money, and asks the question of 'to what extent coinage was used for social and political purposes, and whether it referred to an economic sphere of exchange alone' (von Reden 2003, 9). Von Reden's views on Greek money are different from those of Kurke and Seaford. Her criticism of the latter two concerns the attribution of an absolute set of meanings to money, resulting in the wrong idea that money in itself was able to transform thought. For example, while she accepts Kurke's idea that coinage was related to the shift of political power to the *polis*, she points out that the Greek elite in the 6th century did not reject money as belonging to the sphere of trade, but appropriated it as their symbol of value in civic exchange. Von Reden uses not only texts to make her point; she sees the changing types of the 6th-century *Wappenmünzen* as an expression of an unsettled dispute about who had the authority to mint coin and make payments. The standard civic emblem which appeared on the coins after that (the owls of Athens, for instance) showed that the personal authority of tyrants and archons had shifted to the institutional power of the *polis* (Figure 5).

The examples taken from Kurke, Seaford and von Reden show that the model of the articulation between two transactional orders offers completely new possibilities to evaluate the place and meanings of money in the whole of an exchange system. It does not dismiss the interpretation of money use in economic terms, but puts it in the perspective of the history of politics and thought of a society, and provides a connection between the monetary use and exchange value of coins (as money) and the symbolic and ritual meaning of coins as objects in other forms of exchange. Thus the conceptual gap between coins found in ritual contexts and coin finds in the context of market exchange is closed. Also, the evolutionistic and binary view of how economies develop is replaced by a type of change in which the boundaries of transactional spheres are constantly redefined and the role of money is constantly renegotiated.

Applying a cultural perspective to Roman coinage

No one will deny that, when a large part of the indigenous societies of north-western Europe became part of the Roman Empire, this must have had profound effects on the exchange systems of those 'native societies' as well



Figure 5 *Wappenmünze* (late 6th century B.C.) and Athenian tetradrachm (early 5th century B.C.).

as Roman society as a whole. So far, the changes which occurred have been analysed only in economic terms. As we have seen in the approaches of Kurke, Seaford and von Reden, this is a rather one-dimensional way of looking at a very complex matter. The separation of short-term transactions from the whole exchange system is not only ahistorical but also has as an effect that we cannot explain why the nature of coinage and coin use changed, because its embeddedness in social and political value systems is hardly evaluated.

At a more materialistic level, if the proposition is accepted that a large part of coin finds cannot be interpreted as having been lost in the context of market exchange, the traditional economic models do not offer an adequate framework within which to interpret those coins. If we look at the coin finds of three areas of which I made inventories in the context of previous research (Aarts 2000), and separate the coins found in an urban context from those found in the countryside, the magnitude of the problem becomes evident. Let us for the moment assume that all coin finds in urban contexts can be associated with market exchange (we know for certain this is not true; many urban coin finds are from ritual contexts as well). The urban sites include Roman forts, adjoining villages with a servicing role for the army, and towns. The context of many of the rural coin finds is unknown, but their great quantity makes it improbable that this unknown group would hide a large number of monetary contexts. Figure 6 shows that in all three areas the coin finds of rural settlements and coins from a known ritual context make up more than 60% of the total. Allowing for a generous margin of error, this leaves us still with the fact either that half of the coin finds have been ritually deposited, and belonged to the long-term exchange cycle, or that they were part of (scattered) hoards, in which case they did not belong to either transactional order, but were in a state of potentiality between the two orders. Looking at these coins in a purely economic way would be wrong. For a good

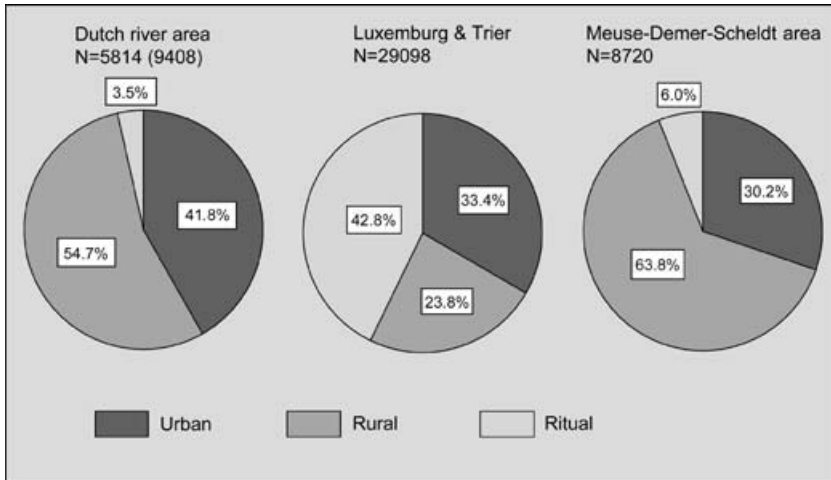


Figure 6 Coin percentages from urban and rural sites in the Dutch river area, the Meuse-Demer-Scheldt area and Luxembourg and Trier.

evaluation of the meaning of these coins we need to consider their entire cultural context.

Translating the traditional concept of monetization into cultural-economic terms, once a society was incorporated into the Roman Empire the number of transactions in the short-term cycle could be expected to increase at the expense of those of the long-term. The number of relations with outsiders grew exponentially; power became more impersonal owing to the shift from local authority to central Roman control. The ways in which wealth and power were represented changed, along with the basis of wealth and power. Claims on land were now regulated by *census*, and laid down in written documents. In order to be powerful in a Roman context it was necessary to conform to new standards of value. The first step was to acquire citizenship, mostly through serving in the Roman army for 30 years. To enter the higher social orders (senators, knights), one had to meet a certain standard of wealth, in Roman society measured in *sestertii*. Through trade, *mercatores*, *negotiatores* and other middlemen entered the scene, who did not care about existing moral codes but were primarily interested in making a profit. All these new relations and changing values fell outside the existing social and cosmological order and this must have had consequences for articulation between the two transactional orders.

So there are many questions to be asked, but how will we answer them? We have seen that, for the Greek world, mostly literary sources are used to analyse the exchange system from a cultural-economic perspective. Of course, this path lies open for the Roman world as well. But there is a basic problem when one wants to use these sources for the provinces lying outside the Mediterranean: literary texts written by Roman authors almost never refer to the societies of the north, and when they do, they are writing about others. Every statement is coloured by a 'central-Roman' value system, and this makes

it hard to use when we want to comment on the cognitive structures of the society of the ‘others’. This holds in particular for the early Roman period, which is precisely when we expect the most profound changes to occur. Still, by careful reading of Roman historians, it is possible to get some insight into the effects of incorporation into the Roman Empire on the exchange system. For instance, Tacitus tells us that, at the beginning of the Batavian revolt, ‘the enemy [Brinno’s Cananefates] fell upon the Roman supply-contractors and merchants who were scattered over the countryside with no thought of war’ (Tacitus, *Historiae*, IV, 15). Why would the Cananefates act in this way? Tacitus offers no reason for it; in fact he represents the merchants as harmless innocent bystanders, who did not have anything to do with this war. But how innocent were they in the eyes of the *Cananefates*? Certainly it is possible that they were primarily interested in booty – the victims may have carried money or other valuables with them. But it is equally possible that they were slaughtered because they were seen as symbols of Roman interference with the traditional values of the exchange system. Similarly, the revolt of Florus and Sacrovir (A.D. 21) in Gaul starts with the massacre of Roman *negotiatores* (Tacitus, *Annales*, III, 42). The reasons Tacitus offers for the revolt are, however, ‘endless taxation, crushing rates of interest and the brutality and arrogance of governors’ (*Annales*, III, 40). So why kill the salesmen? A third example is the revolt of Vercingetorix: Caesar (*De bello Gallico*, VII, 2, 3) tells us that ‘the Carnutes... swooped down at a given signal at Cenabum, killed the Romans who had settled there for purposes of commerce, including Gaius Fufius Citra, a Roman knight of high standing, whom Caesar had put in charge of the commissariat, and plundered their property’. Again, this took place at the beginning of the uprising in 52 B.C. Interestingly, Caesar and Tacitus mention the fact that the merchants were living in the countryside, among the native people themselves. Thus they were the embodiment of Roman meddling with the boundaries of the transactional orders, by redefining the rules by which objects circulated in traditional ways. How exactly this redefinition took form we cannot tell from the surviving accounts, but that is not the point here. The fact that – in all three cases – the revolts started with the killing of merchants shows us that it was not a random act of violence, but was meant as a clear message to the Roman authorities. It can be explained as a violent reaction of conservative forces in a society when the balance between the short-term and long-term cycles is threatened by strangers. By this I do not mean that the natives themselves did not play a structural role in this redefinition of the transactional orders. Renegotiating the transactional orders is, of course, never done by people outside the community; outsiders, in this case Roman merchants (representing ‘Roman’ values), just acted as catalysts. This shows how the model of Bloch and Parry adds a new and valuable perspective to the more traditional (but equally useful) social-political analyses of native revolts by Dyson (1971; 1975).

Staying with written texts, a lot is to be learned from epigraphy. As an example I take the charter of the colonia of Urso (Colonia Genetiva Julia), near what is now Osuna in southern Spain. The texts were found on four bronze tablets in 1870 and 1871 (Figure 7). Apparently, the first draft of the



Figure 7 The charter of Urso, tablets a, b, c, e (from Ménez Pidai 1955, 416).

law was made by Caesar, and enacted as law by Mark Antony, in 44 B.C. (Crawford 1996, i; the translation used here is from Johnson 1961). One section of the law tells us that the coins which were ritually offered at sanctuaries must remain the inalienable property of the gods of those temples:

72. Respecting all money presented or brought to the sacred temples under the category of religious offerings and respecting any portion of such money as remains from the sacrifices performed in accordance with this law in honor of the god or the goddess, to whom any such temple belongs: no person by act, or order, or intercession shall prevent such surplus from being expended in that temple to which the said money is presented or brought under the category of religious offerings, nor shall any person expend the said money or cause the said money to be expended for any other object.

Evidently, while it was permitted to reuse votive coins for the benefit of the temple (or purposes of cult), it was forbidden to spend them on anything else. This is a very clear illustration of the ‘taboo’ of converting money from the long-term cycle to that of the short-term, and it shows us that the model of Bloch and Parry can be very relevant to an understanding not only of how coins were used, but also of how they fit into the cognitive structures of society. Since the text was a part of a colonial charter, we may expect that it was not specific to this *colonia* alone; in all probability it occurred in other colonial charters as well, and represents a much wider validity. It is, however, important to note that it does not inform us about the ‘native’ side of things. There are only two possible scenarios: either the law was in accordance with native practice before the coming of the Romans, or it was not. In the latter case, the law infringed upon the way the two transactional orders articulated traditionally.



Figure 8 Iron signet ring depicting an offering scene at a temple (Martin Henig and the Institute of Archaeology, Oxford).

The charter of Genetiva Julia brings us to another possible source for understanding the way in which the two transactional orders interacted, and how objects circulating in these spheres were given meaning: the coins themselves. Of course, at first sight material objects do not appear to speak to us as directly as a written source, but I am not pessimistic about what can be done. Let us take a look at the votive coins themselves. Both in the Iron Age and in the Roman period, coins were regularly deposited on religious sites. Coins are regularly found in votive deposits in all kinds of sacred places, and sometimes they are found in very large numbers. The model of Bloch and Parry presumes that these coins were part of the long-term transactional order, and texts like the charter of Urso give substance to this presumption. But the coins themselves can carry a similar message; in a number of votive deposits we find coins bearing graffiti with the formula *ex stipe*, followed by the name of the god to whom the coins were offered in the genitive (for instance *ex stipe Fortunae*; see Desnier 1986 for a more elaborate discussion). Translated, this would mean ‘from the money of Fortuna’. Normally only one or two coins in a deposit display such graffiti, and we may assume that they acted as *pars pro toto*. By inscribing the coin in this way it is made clear that the coins were made to be exclusively owned by the divinity, and were not meant to be reused for any future transaction. In other words, it entered what Appadurai (1986, 16) calls ‘the ex-commodity state’ and was frozen in the long-term transactional order. An even more permanent way to ensure that coins could not be used as money ever again was to destroy them by bending the coins or scratching them, thereby removing the stamp of authority (Figure 8). Sometimes votive coins were buried (sometimes along with other votive objects) somewhere on the premises of the sanctuary, and it is perhaps those coins which we are most likely to find during the excavation of a sanctuary. The charter of Urso shows us, however, that not all votive coins ended their exchange cycle in this way; it was permitted to reuse them on the condition that they remain in the domain of the cult. In this way it was possible to periodically collect the votive coins and use them as money to pay for religious festivals, for instance, or for financing a new cult statue. Sometimes we find inscriptions at sanctuaries which suggest such a reuse of votive coins; they carry the formula *ex stipibus*, or even *ex stipe annua* (‘paid out of the (yearly) votive money’) (Figure 9). However, we cannot be sure



Figure 9 Mosaic with inscription from the Roman temple at Lydney (4th century A.D.), which tells us that the mosaic was paid out of money offerings (*ex stipibus*). From Wheeler and Wheeler (1932, Plate XIX A).

that these inscriptions refer exclusively to coins which were deposited and collected in a physical sense; they may also indicate larger gifts of money to a temple, in some cases of which the coins never became part of a votive deposit, but where an amount of money was paid directly to the temple personnel.

This said, it is clear that we need to look closer at depositional contexts, to determine the exact nature of the deposit. We cannot simply assume that all coins found in the direct vicinity of a sanctuary are votive offerings. We may safely do so when it is evident that the coins were found within the sacred space of the sanctuary, the *temenos*. But if its spatial limits are unknown, the coins might just as easily have been lost during commercial transactions at the site, for instance the selling of food or, indeed, of votive objects.

Finally, coin finds may perhaps help us to track changes in the articulation between the two transactional orders over a longer period of time. Since the deposition of coins is a practice which continues from the (late) Iron Age into the Roman period, changing patterns of deposition may perhaps be read as changes occurring in the articulation between the short-term and long-term transactional orders as a consequence of the integration of ‘native’ societies into the Roman Empire.

Gold and silver coins played an important role in the gift exchange of Iron Age societies in Gaul, particularly in the social–political sphere. Roymans (2004) and Nash (1981) suggest that they were specifically used in the forging of client networks by tribal leaders. In the last fifty years of the 1st century B.C. even some copper issues may have circulated in the same sphere (Roymans 2004, 90). The regular occurrence of hoards with gold coins and torcs confirms the view that gold objects indeed played a role in the gift exchange between tribal leaders and their followers. Strikingly, the combination of torcs and coins in hoards only appears from the 3rd century B.C. onwards, while gold torcs circulated much earlier without coins (Fitzpatrick 2005) (Figure 10). It is perhaps not a coincidence that the 3rd century is also when more centralized cult places begin to appear in northern Gaul. Derks (1998,



Figure 10 Torcs and coins in the Late Iron Age hoard of Niederzier (Germany).

183) sees this emergence of separate cult places which were permanently in use in the light of the increasing political integration of northern Gaul into the more urbanized society of central and southern Gaul, bringing about a more hierarchically structured society in which local leaders competed for political power and strove to expand their influence. Although this process started in the 3rd century B.C., it only reached its culmination in the course of the 1st century B.C. It is possible that cult places played an important role in the creation of new social–political structures and identities. Coins may have played an important role in this changing social–political climate; they carried the stamp of the issuing authority, symbolizing the power of these new leaders, and at the same time emphasizing the inalienability of the gifts made by them. Not only were gold and silver coins ritually deposited at these sites, but there is also evidence for minting activities at several of them (see for instance Delestrée 2005; Roymans 2004, 85). The minting of coins at cult places and the gift of coins to the deity legitimized the power of the people who controlled the sanctuaries. This may have taken form in what Appadurai calls ‘tournaments of value’ (Appadurai 1986, 21): recurring events in which the status and rank of the people who participate in them are redefined, but also the disposition of the central tokens of value in the society in question. It is imaginable that these tournaments of value took place during major festivals which were periodically held at important sanctuaries (see also Theuvs 2003).

In the second half of the 1st century A.D., the character of Late Iron Age coinage changed considerably. Gold ceased to be minted after the Gallic wars in northern Gaul, but also silver coins were gradually superseded by bronze, *billon* and *potin* coins, which were sometimes struck in great quantities. This shift from a precious-metal coinage to a base-metal coinage is sometimes seen as evidence of an incipient monetization of Late Iron Age economies (see, for instance, Wigg 1999). But, as Roymans suggested for the case of *triquetrum* coins in the Batavian area, there is evidence to suggest that these ‘low-value’ coins circulated in the same exchange sphere as gold and silver had done before. The emergence of these base-metal coinages is contemporary with the Roman conquest of northern Gaul (Figure 11). On the one hand,



Figure 11 bronze AVAVCIA coin from the Batavian settlement in Tiel (the Netherlands).

one of the probable reasons for minting copper coins was the disappearance of gold to Italy in the form of tribute and booty. But at the same time, Late Iron Age societies were confronted with the Roman exchange system, in which the metals were bound to different exchange spheres, and coins were more extensively used for short-term transactions. The latest Iron Age issues clearly articulated with small Roman bronze denominations, such as the AVAVCIA coins, which were minted on a large scale in the lower Rhine area. Since large numbers of these coins have been found in early Roman forts, it seems a reasonable assumption that they circulated together with Roman low-value coins (*quadrantes*) in a monetary context; they were used for market exchange. Although it cannot be proved, it is a distinct possibility that these base-metal coins were also used for short-term transactions in the ‘native’ central places, although on a less extensive scale. But since we also find them in votive deposits, for instance in the Batavian sanctuary of Empel, where 508 of the 1,073 Late Iron Age and Roman coins consisted of AVAVCIA coins, they kept being used in the long-term cycle as well. Thus in the Late Iron Age coins were not exclusively exchanged in the long-term transactional order, as gold had been before. This meant that sometimes coins had to be converted from the short-term to the long-term order by ritual. Depositing the coins within the *temenos* of the cult place may have been such a conversion ritual.

The fact that the Late Iron Age issues continued to be minted in the earlier tradition while Roman coins were making their way into native society shows us that they could still have fulfilled a function in the regulation of power in the early Roman period in areas where a Roman organization was not yet formally established. The case of the Batavians shows how old and new structures of defining and creating political power exist simultaneously. The members of the pro-Roman faction derived their power from Roman institutions and values – by a career in the military–administrative apparatus and by personal client relationships with ‘Roman’ patrons. In this new political framework, central cult places could no longer play a part in the establishment of political power. Consequently, the need for conspicuous deposition of valuable objects at these places did not exist any more. This

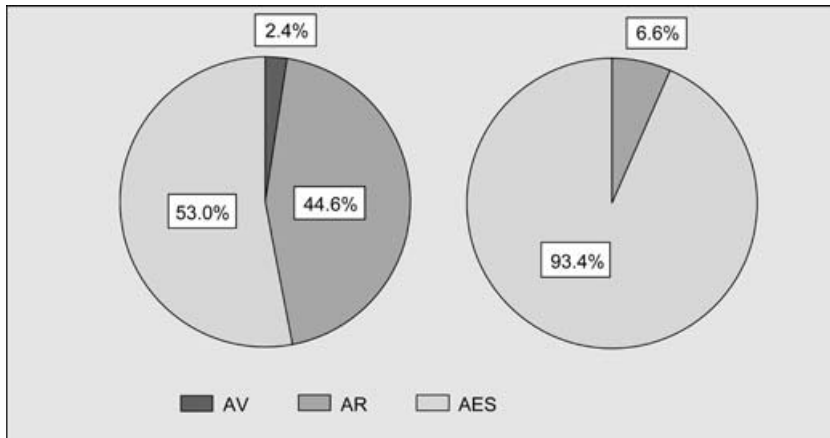


Figure 12 The proportions of coin metals in the votive deposits of smaller sanctuaries in the Meuse-Demer-Scheldt area before and after A.D. 69.

becomes obvious when we take a look at the coins in votive deposits at regional sanctuaries which continuously existed from the late La Tène into the Roman period. They almost entirely consist of low-value bronze coins, and are probably used in the sphere of individual ritual, rather than the communal rituals which must have existed before (see Roymans and Aarts 2005, 354–57). The coins in such votive deposits may be considered as the offerings of more common users of a sanctuary, and the coins they contain should be regarded as votive objects with a symbolical value. Large donations of money by individuals with a higher social rank, however, probably were not deposited in the same way, or if they were, they do not appear in the archaeological record. They were likely to have been used for the benefit of the cult: the buying of a new statue for the god, for instance, the organization of festivals or the reconstruction of the temple. Here, the transformation ritual needed for the conversion of money from the short-term to the long-term cycle did not take the form of a physical deposition of the coin, but was more probably expressed by an inscription stating the identity of the giver and the giving of the gift (Figure 9). The fact that coins changed hands is not relevant in this situation; they were no longer the object of the gift, but it was money that was being used as a means of exchange.

Aside from the central cult places we find that coins which were offered at less prominent sanctuaries show a high percentage of gold and, particularly, silver in the early Roman period. Figure 12 shows the proportion of metals in votive deposits in the smaller sanctuaries of the Meuse-Demer-Scheldt area in the periods until A.D. 69 and from A.D. 69 to 260. It shows that the shift from high-value coins to base-metal coins occurred at a much lower pace in these places. Strikingly, most of the gold and silver in the votive deposits of the Meuse-Demer-Scheldt area consists of Roman coins. This suggests that at these smaller sanctuaries, traditional values continued to exist well into the early Roman period (see also Aarts 2000, 184–85), and that Roman coins were used to support them.

Finally, the increasing use of low-value coins in gifts to the divine suggests that the symbolic language of the market has entered the relations between men and gods. Perhaps the exchange between man and god is rather perceived as the buying of a service than as the exchange of gifts; in other words, coins have become money. This does not mean, of course, that the boundaries between the transactional orders are disappearing; the offering of low-value coins is still a long-term transaction, but the way in which it is represented has changed under the influence of the transformation of the exchange system in the course of the Roman period.

In conclusion, not only are literary texts valuable sources for our understanding of the exchange system in the Roman world, but also epigraphy and material analyses provide equally interesting opportunities for a cultural-economic analysis of the Roman exchange system. Coin finds in particular form an appealing category, but it is important that they should not be studied in isolation, with respect both to other find categories and to the period in which they were used. Iron Age coinage and Roman coinage are still too much objects of separate fields of study. Finally, much work has still to be done on the analysis of coin finds in their archaeological contexts, and it seems worth the effort to reconsider many coin assemblages applying a cultural-economic perspective instead of a purely economic one.

Acknowledgements

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Notes

¹ In his most recent work (Andreau 1999; particularly chapter 12), Andreau displays a nuanced attitude towards the concept of the creation of credit, and certainly does not appear to be a hard-line modernist. The nuance is in the quantification, which seems to have become the universal answer of ancient historians to the primitivist-modernist controversy: banking for a profit did indeed occur in the Roman world, in the same way that some regions displayed more advanced forms of credit than others. Andreau admits, however, that they seem to have been less important than the more ‘embedded’ forms of lending and creating money.

² Kopytoff (1986) is mainly concerned with the cultural biographies of individual objects; Appadurai applies the same notion to classes of object, but calls it the ‘social history of things’, to set it apart as a more long-term and larger-scale perspective than the cultural biography (Appadurai 1986, 34). For the analysis of function and meaning of Roman money, Appadurai’s model is the more interesting. In the model of Kopytoff, objects can move in and out of a commodity state; that is, their attributed (economic) value changes with the cultural context in which they are exchanged. Thus the meaning of an object or class of objects is never permanent, but varies with the context of its use. (Roman) coins are a problematic group of objects because, when they are being used as money, they are not really commodities themselves but an expression of economic value.

³ By this 'frozen' state (hoarding) I do not refer to the concept of 'keeping' of Weiner (1992). Keeping is one of the 'strategies' (alongside giving, taking and asking) Weiner distinguishes specifically within the realm of gift exchange. By hoarding, coins are removed from any exchange cycle, and may enter either transactional order when they are used again.

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Reassessing the roles of Roman coinage *Colin Haselgrove*

In the first third of his paper, Joris Aarts offers an elegant and stimulating review of the ideas that have underpinned our interpretation of coinage and exchange in the Roman world for the past 30 years. In the central section, he outlines a possible alternative approach to analysing Roman coinage, drawing on research in economic anthropology and on the role of money in the Greek world. The final part of the paper discusses ways in which this cultural-economic perspective might be applied, primarily using evidence from northern Gaul.

In all, this is a paper full of good sense and one on which I find it quite difficult to comment, as it contains little with which I significantly disagree and Aarts has already said what needs saying far better than I could! Moreover, whilst he may feel he has to apologize for not being 'a theoretical archaeologist' (he is in fact very well informed theoretically and about a broad range of material, which in my view is what counts), I am even less of a specialist in Roman coinage or the Roman economy, as he will be well aware. I hope nevertheless that by picking up on certain issues raised by this paper, my comments will help advance the debate that Aarts has launched.

The movement of ideas between disciplines

I wish first to comment on a point that might well lead some people to reject the approach that Aarts is advocating here out of principle. Not only does the model that he is proposing derive from anthropology, which some might deplore, but it is already over 15 years old (Bloch and Parry 1989). To my mind, the source of a model is not an issue, as long it provides new and useful insights as this one does, and there has in any case been some extremely valuable work on the nature of money in anthropology. It has long been a characteristic of archaeology that it has successfully borrowed theory developed in other disciplines and adapted it for its own purposes, even in some cases when the relevant ideas have passed their sell-by date in the original discipline.

Bradley (2005, 30–32) provides a good example of this with respect to the current archaeological fascination with ritual. Since 1981 the number of archaeological publications with 'ritual' as a keyword has more than doubled (to 70%), whilst in anthropological publications the number has declined by a quarter (to 30%) (Bradley 2005, Figure 1.12) and the word hardly figures in recent textbooks on anthropological theory. Whether keywords tell the whole

truth is of course another matter; Bloch and Parry (1989), for instance, make little or no direct use of the term 'ritual', whilst finding that most cultures enact specific rituals (transformational procedures) when money or goods are converted from the short-term cycle of individual exchange activity to the long-term cycle of exchange concerned with the reproduction of the social and cosmological order.

Given the fact that a great deal of Roman coinage seems to have been deposited in a votive context, it seems sensible that Roman archaeologists and ancient historians should explore a path which has been shown to be fruitful in prehistory and in recent research on the impact of money in ancient Greece (e.g. Seaford 2004). This leaves the question of whether the time lag in borrowing matters. As someone who is not an anthropologist, I did feel I wanted to know more about how the parent discipline has received Bloch and Parry's model of short- and long-term transactional orders. Do other anthropologists regard it as an appropriate general model? Have criticisms been levelled at it by other workers? If so, are they fundamental objections, or can the model be adapted to meet them? That there is no discussion of these points is for me the one weakness of Aarts's paper.

That said and done, as a subscriber to a cultural relativist approach, I have no problem with Bloch and Parry's proposition that money means different things within and between cultures, and that its meaning is constantly being negotiated, as are the boundaries between transactional spheres. To evaluate the role of Roman coinage, and its impact in different parts of the Roman world, we need to discard evolutionist models of monetization and economic development and consider all the modes of exchange operating in a given context – both of Roman and of native origin – as well as their wider political and social setting.

Cynically, one could argue that one reason why Bloch and Parry's ideas have not been invoked in Roman archaeology until now is that previously there would have been little room for them. Notwithstanding the influence of the three seminal works by Crawford, Finley and Hopkins which Aarts discusses in his paper, my impression is that most Roman coin specialists hold formalist views, perhaps understandably in view of the widespread uniformities we find in hoard composition and site finds across the empire. For a genuinely alternative approach to prosper, significant sections of Roman archaeology had first to adopt a postcolonial agenda, one which gives discrepant experiences their due weight, something that has only really happened in the past few years.

Widening the perspective

Changing intellectual perspectives are also significant in determining how evidence is read and which interpretations prevail. A case in point is Aarts's suggestion that the killing of Roman merchants at the start of all three major Gaulish revolts might have been a consequence of their interference in the traditional values of the exchange system. I suspect that archaeologists of previous generations, particularly those with a military background, would have been predisposed to see this move quite differently, as confirmation of the strategic grasp of rebel leaders such as Vercingetorix and Civilis, who

understood the vital importance of an assured supply system to the Roman army. Aarts may still be correct – indeed both views could apply – but this does underline how easy it is to use what is actually very limited evidence to favour whatever theoretical viewpoint holds sway at a particular time.

In showing how a cultural perspective might be applied, Aarts draws primarily – though not exclusively – on examples from the Netherlands, which, along with the Trier and Luxemburg area, was the focus of his important previous study of Roman coinage in northern Gaul (Aarts 2000). If my own analysis of Iron Age coin finds in Belgic Gaul is any guide (Haselgrove 2005), I shall be surprised if Aarts's figures for the incidence of Roman period coin finds in ritual contexts (his Figure 6) did not turn out to be typical for the province. On the other hand, the particular circumstances of the Batavian region (the fact that the Batavi presumably arose from the fusion of a previously non-coin-using indigenous population and an incoming group with limited coin use, the high proportion of males recruited into the Roman army and the presence of a large Roman military garrison) may not necessarily make this a very suitable region for evaluating how rapidly Roman coinage penetrated native societies (although aspects of the Batavian situation may be more typical than one thinks, since I am sure that Roymans (2004) is right that ethnogenesis was far more widespread at this period than we have previously allowed).

Certainly, the pattern of coin deposition in the interior of Belgic and Celtic Gaul – and later on in Britain – implies that Roman coinage entered circulation much more slowly there than in the military zone, whilst also presenting a number of similarities to the Netherlands to which Aarts's ideas can profitably be applied. Roman coins do not start to appear in stratified deposits in significant numbers before the Tiberian period and they do not dominate until Flavian times (Haselgrove forthcoming). Also, at Belgic religious sites for which suitable data exist, the frequency of Roman coins in later 1st-century A.D. contexts is lower than in large civilian settlements of the same date. The temporal loss pattern for single Roman gold coins (based on their date of issue) is similar to that for site finds (Callu and Lorient 1990), casting further doubt on Crawford's view (1985, 275) that the monetary system in the interior of Gaul was already fundamentally Roman by the Augustan period. Interestingly, the density of 1st-century *aurei* in Belgic Gaul is twice that in Celtic Gaul – partly no doubt because the former includes the military zone, but also presumably because gold had ceased to be the preferred metal for coinage in most of Celtic Gaul before the Roman conquest – echoing Aarts's observation about the persistence of traditional value systems well into the Roman period once one leaves the public arena (his Figure 12).

A question of scale

Aarts rightly reminds us that we need to look carefully at the depositional context of coin finds from sanctuaries, some of which after all might be losses from commercial transactions, not offerings. In his conclusion he returns to a similar theme, with the injunction that coins should not be studied in isolation, but with respect to other finds categories and the period in which they were used. I agree. The problem is that due to the sheer explosion in

material at our disposal, this is now very difficult to do on anything other than a fairly local scale. Thirty years ago, it was just about possible for a Ph.D. student to contemplate collecting contextual data on Iron Age coinage for the whole of south-east England – and that took far longer than I had anticipated – but now it would be out of the question. All told, I had to deal with less than 200 sites and very few of these had large numbers of stratified finds (Haselgrove 1987). The total for Belgic Gaul, on the other hand, is now well over 1,000 sites and many of these are large complexes comprising several separate coin-yielding areas with different functions and occupation histories (Haselgrove 2005). From a rapid inspection of Aarts's data (2000), I would guess that the number of sites with Roman coins is at least an order of magnitude higher.

One solution, as Aarts did for his own Ph.D. research, is to focus on selected sub-regions for which a good dataset already exists, but this runs up against the problem that the empirical case studies either cluster in a particular zone – in this case on or near the Rhine frontier – or are too small and thinly spread over several separate zones or provinces to do justice to their internal diversity. To implement the kind of research agenda that Aarts has set out for studying the evolving spatial and temporal role of Roman coinage in different kinds of exchange, we really need to be able to compare contextualized data from a range of provinces (tax-importing, tax-exporting, where the inhabitants were previously relatively centralized or more acephalous, and so on) while ensuring that the information from individual provinces is sufficiently detailed and representative to capture variations arising out of the differing cultural traditions and trajectories of their constituent peoples.

In conclusion, and as an outsider, it seems to me that if we are radically to transform our knowledge of the workings of the Roman monetary economy beyond the general models developed by Crawford and Hopkins and others, we need to think further about how we might operationalize the approach set out by Aarts. My hope is that his paper will inspire other workers interested in Roman coinage to examine their own material employing a similar perspective and methodology, so that over time a broader picture will emerge. At the same time, if academic debate is not to remain undesirably abstract for the foreseeable future and our ideas are to be grounded in the material on the kind of scale that seems to me necessary if we are to understand both general and localized roles of coinage and money in the Roman world, I cannot help thinking that some kind of collective effort, involving collaboration between different European countries and centres, is required.

The circulation of coins and the Roman periphery *Mahir Şaul*

The discussion of coin finds in the European periphery and the light they throw on the nature of the Roman socio-economic complex is the most

interesting part of this paper for me, because it is somewhat analogous to the relations of western Europe with west Africa in the 19th and early colonial 20th centuries. But this commentary steps over into the vast field of classical archaeology that is unfamiliar to me and instead of pursuing this analogy I find it more comfortable to make a few more general remarks on the use of social anthropological ideas and questions of method.

I feel that the contrast between recent economic anthropology and the debates that took place in it say 30 or 40 years ago may be somewhat overdrawn. The juxtaposition of ‘cultural-economic’ and ‘simply economic’ interpretations would not stand close scrutiny, and perhaps more importantly bypasses the more interesting differences of approach on the defining features of socio-economic organization. I agree with the author and many others that the substantivist–formalist debate does not appear as terribly illuminating to us today, but to resituate the difference in terms of old and new literature, and ignore other significant alternatives, can simply lead us to repeat the trite oppositions of yesterday.

For the sake of fairness it must be recognized that the position that Bloch and Parry defend in their introduction is only a restatement of Polanyi’s views on money, that the presence of elaborate monetary instruments and circuits of trade and finance in ancient or precolonial societies does not constitute evidence that these were ‘market societies’. The addition of Bloch and Parry links this – by now I think rather uncontroversial – point to Bloch’s view developed in the context of another polemic on cognitive processes, that human societies can be analysed in terms of complementary but contrapuntal propensities for short-term advantage and the long-term need of social reproduction. Whether this language (incidentally also Polanyi-esque) can be successfully turned into a research method is an open question, but the danger it presents in encouraging casuistry needs to be recognized. Terms such as ‘the expansion of the market’ or ‘monetization’ are I think quite transparent; replacing them with phrases like ‘the number of transactions in the short-term cycle could be expected to increase at the expense of those of the long-term’ (p. 19) is in my opinion a regression in clarity of expression, an unnecessary burdening of style with gnostic vocabulary.

Going back to Polanyi, the problem of his formulations on archaic societies lay perhaps not in his relativism, but in his black-and-white universalism, in the opposition of market and non-market, the division of the world into ‘we’ and ‘they’. In the attempt to overcome this tendency an economic anthropologist glances hopefully in the direction of the classical archaeologist who, like the historian of medieval Europe, is so strategically situated to deconstruct it. What is exactly a ‘market economy’? Perhaps the famous cross-generational debate among classicists between ‘modernist’ and ‘primitivist’ interpretations did not always zero in on the most pertinent issues.

To my mind it is crucial to distinguish, as Polanyi in a few instances did but mostly did not, between markets for food, for craft items and for rare primary materials, and long-distance trade, on the one hand, and on the other the sale of land and labour as factors of production, the use of capital in large-scale production, i.e. the rearrangement of economic life in the form

of capitalism. If we lose sight of this, the very elaborate commercial life of, for example, the Islamic medieval world would appear very 'modern' in details, and it is. Neither the use of coins or other monetary instruments, nor supply-and-demand-driven prices, are the most relevant observations for this kind of analysis. In our most advanced stage of capitalism, as Hart reminds us (2000), transactional currency as physical objects tends to disappear altogether. The code words that Polanyi adopted in the later phase of his career can mislead; the author also does well to leave aside the quagmire of 'rationality debate' and 'scarcity' which blocked economic anthropology in the 1960s, but perhaps we should go back to Polanyi's *The great transformation* (1944). Long- and short-term cycles are, I am afraid, of little help here, and so is 'the social biography of things'.

What is needed, on the contrary, is an effort to move up from the singularity of the object, as Aarts in fact does in most of this article, to the socio-economic pattern conceived as a theoretical entity, and sustain the discussion on this platform. Coming back to the object takes us a step down. Like 'custom' for the ethnographer, artefacts recovered in digs constitute I suppose the most tangible reality for the field archaeologist, and there is a temptation to peg interpretation on those objects, hence the urge to elaborate on the 'meaning and function' of coins. But again, on the analogy of 'custom', I think we are better off resisting this urge. Not only because 'meaning' is an elusive term that can keep us going in circles, but also because this oblique entry into the society keeps us in a maze of side alleys, away from the main axes of the broader pattern.

Ultimately the large questions Aarts asks are, what were the main institutions of the Roman world that made it the kind of place it was? What would it be like to live in one of these peripheral communities? The answer would be an outline of the main principles of community life, into which the 'meaning' of anything can be fitted. Knowing 'the way in which the actors view their world' requires that we understand where the actors stood in that world, what that world was, how it was organized, whether it was stable or changing. For example, I am mesmerized by the phrase 'the disappearance of gold to Italy in the form of tribute and booty' (p. 25). How were these levies collected and transmitted to the centre? What repercussions did they have for other aspects of life in the communities, for example on hierarchical relations, on the organization of food production, on handicraft activities, on consumption? And how were all of these linked to the use or non-use of money, in the marketplace or as votive offerings?

'Embeddedness' subsumes all of these questions but is rather blunt as a concept. Of the literature discussed by the author, Keith Hopkins's analysis of tax-importing and tax-exporting provinces is closest to providing a general pattern for the discussion of monetization. With regard to Greek antiquity, I have been most intrigued by Ellen M. Wood's novel assertion (1989) that it was not slaves but free farmers who were the backbone of the economy and of the political development of the *polis*. This is in contrast to the Roman world. I remain curious on what and how people produced, the extent of the circulation of goods between the far-flung corners of the empire,

what the decommissioned soldiers did for a living as well as with their money.

One advantage of working on late antiquity, it seems to me, is that one can dispense with flogging the horse of evolutionism. Whatever a person can say about the progression of money use in Roman times, we all know that it did not result in the ‘market economy’ of later Europe, because before that came a (very) long period of monetary retrenchment and the closed self-sufficient economies of feudal times. And that again is one of the puzzles of economic history, the variety that asks big questions, for which ‘in and out of commodity phase’ observations are no help at all, but archaeological research of the type Aarts does certainly can be. When we are trying to broaden our horizon, conceiving ‘purely economic’ in its most restricted sense – and juxtaposing to it hoarding and ritual offering – may result instead in narrowing our field of understanding.

This may be related to another question that is methodological in nature. To my mind it is an illusion to try to improve an explanation by multiplying the supposed causes of a phenomenon. Let us take, for example, the question of why the Roman villa did not spread in the north. Was it because large-scale cereal production was technically difficult in the sandy soils of these areas, or was it rather because the elites in those places adhered more closely to martial and pastoral values? When the issue is articulated in the form of these alternatives we have already made some progress and can hope for an answer (although some people might think that the second option begs a further question and does not provide a fully satisfactory resolution). The first of these options is clearly one that – in principle – could be validated with empirical evidence. If empirical evidence is lacking, however, the question cannot be settled with just theoretical debate. Furthermore, if the sandy-soils argument proves to be valid, it makes the conservatism of elites argument superfluous. Yet if elite attachment to martial values prevented the development of the villa where the soils were demonstrably suitable for large-scale agriculture, then the nature of the soil may become redundant to the debate. I imagine that conclusive proofs in these matters are in practice much more difficult to obtain than it appears to a non-archaeologist, but my point is that simply adding the two factors back to back does not provide a better or more rounded explanation; on the contrary it eliminates the logic that each hypothesis possesses when it stands by itself. We may not be sure about the answers but it is better to be clear on the reasoning.

In my reading Aarts decides at the end of the article for the view that as time went by currency use increased in the Roman periphery, the view that others would call growing commercialization. But this seems to be only part of the story. Do growing cash transactions make the late Roman Batavian communities a ‘market system’? If not, what were they? Clearly we need to go beyond the circulation and votive offering of coins, put aside the mantra of meaning, and engage in a systemic analysis of the Roman socio-economic complex, tasks that require connecting to the classical social and economic scholarship that has been developing since the 19th century, unperturbed by the trend *du jour* or fashion of the season.

From monetization to culture change *Walter Scheidel*

Aarts's argument revolves around three binaries: formalist and substantivist approaches to the study of the ancient economy, narrow economy-centered and broader culture-centered assessments of money use, and long-term and short-term transactional orders. Binary opposites play a critical role in our construction of the world, and consequently provide potent rhetorical tools for structuring an argument and especially for demarcating the novel and imaginative from the old and staid. At the same time, while this arrangement helps to define ideal types, it also runs the risk of obscuring what the debate is really about.

We are told, not for the first time, that the study of the ancient economy has been hamstrung by an unnecessarily disruptive division between formalist/modernist and substantivist/primitivist perspectives. Sensibly enough, Aarts advocates a combination of both. Yet 'modernist laws and models' are not nearly as divorced from 'substantivist spectacles' as one might be led to believe, and ancient historians have little need to design their own hybrids to bridge this much-lamented divide. Formal economics, in the form of the new institutional economics, has long acknowledged the interplay of neoclassical principles and cultural conventions in shaping and constraining economic activity and performance. From that vantage point, the Bücher-Meyer-Hasebroek-Rostovtzeff-Finley & Co. debate may be much ado about nothing much at all. A dead horse can be flogged only so many times before the carcass falls to pieces, and it would seem high time to grant the remaining shreds their much-deserved final rest. Calls for the holistic recombination of ostensibly conflicting perspectives are somewhat redundant whenever the contrast itself is more apparent than real. Aarts's example about the differential development of the villa economy west of the Rhine is a case in point: do we really need to 'combine' two levels of explanation – socio-economic and cultural – in order to produce a 'balanced view' if it is not at all clear that they differ in the first place? After all, one might suspect that 'adherence to martial and pastoral values' (p. 5) on sandy soils may simply be a function of ecological context, rather than an independent variable.

In the following sections, 'old-school' economic historians fare poorly, while younger and putatively more enlightened cultural historians are credited with a better grasp of the issues involved in explaining monetary evolution. Yet looked at more closely, it may be unfair to fault old warhorses such as Keith Hopkins and Richard Duncan-Jones for their implicit equating of money use with 'monetization', and of monetization with commercial exchange. Neither of them seeks to understand the nature of money per se, or to appreciate the full range of its uses; instead, they ask questions about the imperial economy, and draw on coin finds to gauge economic development. Their aim is not to deny money a non-commercial dimension; the latter is simply not relevant to their questions. In order to dismiss this tightly focused

approach as untenable, we would need to be able to show that the use of coin finds as proxy evidence of commercial penetration is unwarranted and misleading. Evidence of the secondary use of large numbers of Roman bronze coins in ritual contexts hardly satisfies this condition, unless imperial issues were shipped to these locales for the specific purpose of votive deposition rather than via the ordinary conduits of state pay and market exchange. This is surely not what Aarts himself wants to argue; in fact, he plausibly ascribes the increasing volume and apparent ubiquity of Roman coin in the early imperial period to the presence of Roman military forces and merchants. It may be true that from that perspective, ‘the possible functions of money in social and ritual exchange are neglected’ (p. 9) – yet this is a problem only for those who wish to explore all aspects of money use and its implications for our understanding of cultural change in the wake of imperial conquest. Economic historians would seem to be the wrong targets here: their focus on a clearly defined question need not be read as a sign of ignorance about issues beyond the scope of their own research agenda. Indeed, it is up to students of culture change (or what in a bygone age used to be known as ‘Romanization’) to rise to the occasion and afford non-commercial uses of coin the attention they deserve. The fact that a study as rich as Woolf’s (1998) yields a total of four sentences and three footnotes on coinage suggests that there is still a lot of work to be done in bringing monetary issues into the mainstream of studies of the various ways in which provincials did or did not ‘become Roman’.

Yet even if we strive to make sure that all facets of money use are taken into account, we may well end up with what we already knew. From the way Aarts presents his own case study, it appears remarkably easy to recast the new ‘cultural-economic’ narrative as yet another retelling of the old Romanization story. Thus, prior to conquest, Gallic elites instrumentalized imported and imitated precious metal coins to shore up their status, by employing them in non-commercial ways. As the Roman state took over, it siphoned off local gold (to the extent that the gold price in Rome fell by one-fourth in the 50s B.C.) but soon replaced it with silver (shipped to garrisons) and bronze (brought in by merchants keen to relieve soldiers of their high-denomination coins). Locals such as the Batavians earned silver and bronze currency for military service or provisioning the garrisons. Deposits of high-value (gold) coin disappeared from the principal sanctuaries; elites presumably converted Roman money into brick and marble to enhance their prestige, while commoners dedicated low-denomination coin in bulk. In more marginal settings, ‘native’ votive traditions persisted for longer (although silver had by now replaced gold), until similar transformations finally occurred. All this is readily compatible with the standard master narrative of Roman action: ‘Romans’ appear on the scene and do novel things, and ‘natives’ respond; locals change their votive habits accordingly, but only gradually and in a capillary fashion, from the centres of Roman presence outwards. There is nothing wrong with that picture – even the most avid explorers of hybridization and creolization processes who wouldn’t be caught dead anywhere near an evil Haverfieldian acculturation model tend to have a hard time denying the largely unidirectional impact of foreign rule on local lifestyles

and behaviour in the western provinces of the Roman Empire. It would indeed be surprising if the numismatic data painted a significantly different picture. Moreover, the requisite element of hybridization is provided by the fact that large quantities of coin were used for deposits of this kind at all. At the end of the day, the transformation of local practice in direct consequence of imperial intervention and presence is the key element of the story.

Aarts's discussion of the reuse of dedicated coin is a case in point; one wonders if or under what circumstances this would have been feasible in the pre-conquest period. It may be that the 'fact that coins changed hands is not relevant' (p. 26) to our association of monetary votive offerings with a particular transactional order, but it strikes me as highly suggestive of the sheer scale of change brought about by Roman commercialization. Coin was used to specific ends in specific spheres of exchange both before and after conquest, whereas the way in which it was used changed in significant ways from one period to the next; under these circumstances, how much mileage can we ultimately hope to get out of the binary juxtaposition of long-term and short-term transactional orders? The colonial charter of *Genetiva Julia* is a 'Roman' – in the sense of 'imperial-centre' – text, meant to transfer heartland institutions to the periphery, and reflects experiences at the imperial core; for instance, we may assume that the priests of *Libitina* in Rome did not hoard all the coins that had been handed over on the behalf of the deceased but spent some of them in the marketplace. The same was now to be the case in the provinces; as Aarts points out, 'the symbolic language of the market has entered the relations between men and gods' (p. 27). This may help us salvage at least certain elements of the (rejected) binary opposition scheme in Aarts's Figure 3; what we observe is a shift from money use embedded in social structure to money use embedded in the market, in the sense that market conventions of money use had come to penetrate ritual contexts. The presumption of individualized offerings (via the dedication of bronze coins) as opposed to (surmised) previous community ritual may serve as an analogous example of potentially dramatic change.

This brings me to my final point. The best way to understand changes in money use that unfolded in response to 'imperialization' is to adopt a firmly comparative perspective. The hinterland of the Lower Rhine may well be a special case, conditioned as it was by the presence of large and well-remunerated military forces. It would be interesting to see how Aarts's reconstruction compares to developments in, say, Brittany or the Massif Central. Vast numbers of small coins were deposited at Bath throughout the Roman period, whereas locals in Northumberland seem to have recycled Roman bronze coins into brooches and other objects.¹ Our final goal should be a synopsis of changes not just in the volume and distribution of coin but also in the use of coin throughout the western empire that relates observed outcomes to a clearly defined set of contextual variables. Aarts's study provides an important building block for this project.

Notes

¹ *British Archaeology* 70 (2003) (www.britarch.ac.uk/ba/ba70).

Communities and the empire. The power of contextual analysis
Joris Aarts

It is a new and exciting experience for me to read the critical comments on my article by people who are so well informed about the topics I discussed. I am very grateful to Colin Haselgrove, Mahir Şaul and Walter Scheidel for their willingness and time to critically read my article and provide a basis for further discussion.

All three reactions share a few main points, which gives me the opportunity to organize my reply according to these points, rather than answering each discussant separately.

The first point concerns my narrative of the history of thought on monetization in the Roman world. Both Şaul and Scheidel show reservation about the relevance of my discussion of the substantivist–formalist controversy about the nature of the ancient economy. Scheidel argues that the contrast between ‘modernist laws and models’ and ‘the spectacles of a substantivist’ (p. 35) is simply not real, with which, of course, I agree wholeheartedly. However, I am slightly wary of his suggestion that modern formalism provides enough room for cultural explanations, and that ancient historians ‘have little need to design their own hybrids’ (p. 35). As example he refers to the combination of ‘economic’ and cultural factors to explain the difference between the villa landscapes and non-villa landscapes in northern Gaul. Scheidel suggests that the cultural may be just a function of the economic (ecological context), and thereby reduces the importance of the cultural approach. My point is that if we take his view, there is the danger of entering the quagmire of the discussion of (culturally defined) rationality and irrationality of human behaviour, which is best avoided. What I like about presenting the ‘two levels of explanation’ as equally relevant is that it acknowledges the relation between the two without deciding which came first or which was the most important. If we try to decide, we are in danger either of ecological determinism or of excessive cultural relativism, in case we take the opposite view. As an analogy, we might look at physicists’ theories about the nature of light. It seems that, depending on which type of experiment is conducted, light sometimes behaves as particles, sometimes as waves. In classical theory, this was considered an impossible duality, but quantum mechanics provided a theory which resolves the paradox by stating that the properties of light are a function of our interaction with it and do not exist separate from us (Zukav 1979, chapter 3). This actually enhances our understanding of the nature of light and provides us with the basis for further experiments, and I think the same line of thought can be applied to the rational (economic) and cultural dimensions of human behaviour.

Şaul has made a similar comment on the use of the villa landscape example, but does not suggest that one type of explanation should be viewed as a function of the other. Instead, he prefers a clear choice for one of the

explanations, and, as long as the material evidence does not enable us to make a well-founded decision, to be happy with the coexistence of the two without trying to treat them as interrelated. As I have made clear, I still see no real objection to the latter. I do not think that the twofold explanation of Roymans muddles our perspective of social-economic dynamics in northern Gaul in the Roman period. However, I do think that it calls for a model which integrates both types of explanation. Calling such a model ‘hybrid’ (as Scheidel does) only burdens it with the remnants of the formalist–substantivist debate, which has – we all agree – become obsolete or has never had any relevance at all.

The second point which invited a reaction from both Scheidel and Şaul is my reading of the texts of ancient historians about the role of money in the ancient economy. I want to make clear that it has never been my intention to invalidate the approach of ‘old-school’ economic historians (Scheidel’s words, p. 35) or ‘resituate the difference in terms of old and new literature’ (Şaul, p. 32). I have tried to show that – however valuable I think an economic perspective on monetization may be – the approach is not adequate to evaluating money in all its functions or repertoires of use. This may be an effect of the lack of interest of economic historians in the ‘nature of money per se’ or in ‘the full range of its uses’ (p. 35), like Scheidel argues, but this is not the point. I am interested in the full range of the use of money in (Gallo-)Roman society, and I think that to understand more of the ‘non-economic’ functions of money, we need another perspective on the role of money in societies, which incorporates the use of money both in monetary exchange and in ceremonial or ritual exchange. I agree with Şaul that ‘classical’ vocabulary, for instance ‘expansion of the market’ and ‘monetization’, may sound more elegant and transparent than the increase of transactions in the short-term cycle. But are they really? As long as it is unclear what someone means by ‘the market’ and ‘monetization’ it seems to me that there is a real danger of misunderstanding an author’s intentions. Also, ‘classical’ vocabulary does not extend to the use of money which was not ‘embedded in the market’.

This brings me on to the subject of the model of Bloch and Parry, which does offer a framework within which to analyse the full range of functions of money in any given society. I admit that the omission of a discussion of this model within its parent discipline, as Haselgrove has remarked, may have been a wrong choice on my part. Partly, his question is answered by the comment of Şaul. Şaul’s main objection to using Bloch and Parry’s model lies in the danger that it leads us away from the larger structures of society and encourages particularism and descriptive analysis (‘casuistry’). He is right in stating that my main question is ‘what were the main institutions of the Roman world that made it the kind of place it was?’ However, there are many ways to try to answer this question and answers may be sought on different levels. Şaul advocates a top-down approach, in which first ‘the main principles of community life’ are laid down, before trying to fit in ‘the “meaning” of anything’ (p. 33). Thus he sees great value in Hopkins’s model of taxes and trade, which sketches the broad outlines of exchange in the Roman world, providing a framework to be filled in with more detailed information about what this meant at the level of communities (how were taxes really gathered

and redistributed, how was food-production organized, and how did this relate to the use or non-use of money?). Regarding this, I do not disagree with Şaul. It is not my intention to replace Hopkins's model with a Bloch-and-Parry version; I think Hopkins's model is extremely useful to describing how taxes and trade interacted on an empire-wide level. But when we want to descend to a more mundane level, that of the communities of the Batavian *civitas*, for instance, I do not understand how Şaul proposes to do this without 'coming back to the object'. The information from ancient texts is simply not enough to connect the larger structures in Roman society with what was actually happening on the level of the communities, and I think archaeology can play – and has played – a crucial role in this. Without saying that money was at the heart of all things, I do think that it is worthwhile to consider coins as one piece of evidence which enables us to understand the exchange system at a regional or local level. Of course, it must never be considered in isolation, and that is why I have stressed the importance of looking closely at archaeological contexts and in as broad a range of material culture as possible (including ancient texts). There may be difficulties in the scale of such an undertaking, as Haselgrove warns us. But if one accepts the relevance of coin evidence for the understanding of the exchange system in the Roman world, archaeological contexts are indispensable for information about the nature and scale of the use of money. Hopkins's large-scale model is of limited use for analysing contexts, and I think Bloch and Parry's ideas are better suited to providing us with a structure which helps us to interpret the material evidence on a regional and local level, simply because it incorporates the non-economic use of coins as well as the economic use, and is concerned with the interrelation or articulation between both dimensions of coin use. Şaul's doubts about 'the urge to elaborate on the "meaning and function" of coins' (p. 33) make sense only if the results of the contextual analyses are not used as feedback for the large-scale models of the exchange system in Roman society.

The same applies to Scheidel's comment that the study of coin finds would probably not tell us more than we already know about the impact of the Roman Empire on the societies which became part of it. This is also argued from a top-down perspective. I believe that a 'bottom-up' approach prevents us from being content with too general a view on Roman society which was actually very diverse in the way regional and local communities changed as a result of their incorporation into a larger structure, or, if one thinks this a more elegant term, how they became 'Romanized'.

Many of the examples I gave in my article are derived from my work on the military frontier zone in the north-western part of the Roman Empire, and this led all three discussants to question how representative the societies in the Lower Rhine area are of other parts of the empire. Clearly, they are not. In this I concur with Haselgrove, who suggests that to get any further with the topic of exchange systems in the Roman Empire and the changes that occurred, more work like this needs to be done in various parts of the empire, which we expect to be different from one another. If I read Şaul correctly, he agrees with this as well.

A final point which I want to make here is about the intended readers of this discussion article. One might be very cynical, and say that only

people will read it who are already well informed about the main issues in economic anthropology, for instance what a market society is, what 'embeddedness' means, or what the formalist–substantivist debate was about. One might remark, as Şaul does, that everyone knows that Roman society never developed into a market society in late antiquity and the Middle Ages. I fear this may be too optimistic a view. As Haselgrove remarks, most Roman coin specialists (and I add Roman archaeologists in general) implicitly hold formalist views on the Roman exchange system in the narrowest sense of the word, and are frequently not aware of any alternative approach. But since they provide the material which is needed to construct ideas about the larger structures in ancient society, it is of crucial importance that they become aware of more cultural explanations of archaeological finds instead of 'classical economic' explanations, and I apologize for the crude binary here. However implicitly, the set of ideas which any field archaeologist or material specialist starts out with will be of great influence on the quality of the information which is gathered, and will ultimately define how far it can be used to construct different interpretations.

References

Classical texts

- Caesar, *De bello Gallico*, ed. H.J. Edwards, 1970 (London, Loeb Classical Library 72).
 Tacitus, *Annales*, ed. J. Jackson, 1979–86, London (Loeb Classical Library 249, 312, 322).
 Tacitus, *Historiae*, ed. C.H. Moore, 1979–80, London (Loeb Classical Library 111, 249).

Modern texts

- Aarts, J.G., 2000: Coins or money? Exploring the monetization and functions of Roman coinage in Belgic Gaul and Lower Germany 50 BC–AD 450, dissertation, Free University of Amsterdam.
 Aarts, J.G., 2003: Monetization and army recruitment in the Dutch river area in the early 1st century AD, in Th. Grünewald and S. Seibel (eds), *Kontinuität und Diskontinuität, Germania inferior am Beginn und am Ende der römische Herrschaft*, Berlin and New York, 162–80.
 Andraeu, J.G., 1977: La Banque antique et l'économie moderne, *Annali della Scuola Normale Superiore di Pisa. Classe di lettere e filosofia* (3rd series), 1125–52.
 Andraeu, J., 1999: *Banking and business in the Roman world*, Cambridge.
 Appadurai, A., 1986: Introduction. Commodities and the politics of value, in A. Appadurai (ed.), *The social life of things*, Cambridge, 3–63.
 Bloch, M. and J. Parry, 1989: Introduction. Money and the morality of exchange, in M. Bloch and J. Parry (eds), *Money and the morality of exchange*, Cambridge, 1–32.
 Bradley, R., 2005: *Ritual and domestic life in prehistoric Europe*, London.
 Breglia, L., 1950: Circolazione monetale ed aspetti di vita economica a Pompei, in *Pompeiana*, Napoli, 41–59.

- Callu, J.-P. and Lorient, X. (eds), 1990: *L'Or monnayé II. La Dispersion des aurei en Gaule romaine sous l'empire*, Juan-Lés-Pins (Cahiers Ernest-Babelon 3).
- Crawford, M.H., 1970: Money and exchange in the Roman world, *Journal of Roman studies* 60, 40–48.
- Crawford, M.H., 1985: *Coinage and money under the Roman Republic*. London.
- Crawford, M.H., 1996: *Roman statutes*, Vols 1 and 2, London.
- Crielaard, J.P., 2003: The cultural biography of material goods in Homer's epics, *GAIA* 7, 49–62.
- Dalton, G., 1977: Aboriginal economies in state societies, in T.K. Earle and J.E. Ericson (eds), *Exchange systems in prehistory*, London and New York, 191–212.
- De Blois, L. & J. Rich, 2002: *The transformation of economic life under the Roman Empire*, Amsterdam (Impact of empire (Roman Empire) 2).
- Delestrée, L.-P., 2005: Les offrandes monétaires sur les sanctuaires du Belgium, in C. Haselgrove and D. Wigg-Wolf (eds), *Iron Age coinage and ritual practices*, Mainz am Rhein (Studien zur Fundmünzen der Antike 20), 321–36.
- Derks, T., 1998: *Gods, temples and ritual practices. The transformation of religious ideas and values in Roman Gaul*, Amsterdam.
- Desnier, J.-L., 1986: *Oblata stipis. Recherches sur les offrandes monétaires (des lieux sacrés en Gaule à l'époque romaine)*, Paris.
- Duncan-Jones, R., 1992: *Structure and scale in the Roman economy*, Cambridge.
- Duncan-Jones, R., 1994: *Money and government in the Roman Empire*, Cambridge.
- Dyson, S., 1971: Native revolts in the Roman Empire, *Historia* 20, 239–74.
- Dyson, S., 1975: Native revolt-patterns in the Roman Empire, *Aufstieg und Niedergang der Römischen Welt* II.3, 138–75.
- Finley, M.I., 1992: *The ancient economy*, London.
- Fitzpatrick, A.P., 2005: Gifts for the golden gods. Iron Age hoards of torcs and coins, in C. Haselgrove and D. Wigg-Wolf (eds), *Iron Age coinage and ritual practices*, Mainz am Rhein (Studien zur Fundmünzen der Antike 20), 157–82.
- Hart, K., 2000: *The memory bank. Money in an unequal world*, London.
- Haselgrove, C., 1987: *Iron Age coinage in south-east England. The archaeological context*, Oxford (BAR 174).
- Haselgrove, C., 2005: A new approach to analysing the circulation of Iron Age coinage, *Numismatic chronicle* 165 (in press).
- Haselgrove, C., forthcoming: The impact of the conquest on indigenous coinages in Belgic Gaul and southern Britain, in P. de Jersey (ed.), *Celtic coinage 2001*, Oxford (British Archaeological Reports).
- Hodges, R., 1988: *Primitive and peasant markets*, Oxford.
- Hopkins, K., 1980: Taxes and trade in the Roman empire (200 BC–AD 400), *Journal of Roman studies* 70, 101–25.
- Hopkins, K., 2002: Rome, taxes, rents and trade, in W. Scheidel and S. von Reden, *The ancient economy*, Edinburgh, 190–230.
- Howgego, C., 1992: The supply and use of money in the Roman world, 200 BC–AD 300, *Journal of Roman studies* 82, 1–31.
- Howgego, C., 1994: Coin circulation and the integration of the Roman economy, *Journal of Roman archaeology* 7, 5–21.
- Johnson, A.C., 1961: *Ancient Roman statutes*, Austin (The corpus of Roman law (Corpus juris Romani) Vol. 2).

- Kopytoff, I., 1986: The cultural biography of things. Commoditization as process, in A. Appadurai (ed.), *The social life of things*, Cambridge, 64–94.
- Kurke, L., 1995: Herodotos and the language of metals, *Helios* 22, 36–64.
- Kurke, L., 1999: *Coins, money, games and gold*, Princeton.
- Kurke, L., 2002: Money and mythic history. The contestation of transactional orders in the fifth century BC, in W. Scheidel and S. von Reden, *The ancient economy*, Edinburgh, 87–113.
- Meikle, S., 2002: Modernism, economics and the ancient economy, in W. Scheidel and S. von Reden, *The ancient economy*, Edinburgh, 233–50.
- Ménendez Pidal, R., 1955: *Historia de España. España romana*, Madrid.
- Nash, D., 1978: Plus ça change Currency in Central Gaul from Julius Caesar to Nero, in R. Carson and C. Kraay (eds), *Scripta nummaria Romana. Essays presented to Humphrey Sutherland*, London, 12–31.
- Nash, D., 1981: Coinage and state development in Central Gaul, in B. Cunliffe (ed.), *Coinage and society in Britain and Gaul. Some current problems*, Cambridge (CBA Research Reports 38), 10–17.
- Polanyi, K., 1944: *The great transformation*, New York.
- Polanyi, K., C. Arensburg and H. Pearson (eds) 1957: *Trade and market in the early empires*, New York.
- Pryor, F.L., 1977: *The origins of the economy. A comparative study of distribution in primitive and peasant economies*, New York and London.
- Rostovzeff, M.I., 1957: *The social and economic history of the Roman Empire*, Vols 1 and 2, Oxford and New York.
- Roymans, N., 1990: *Tribal societies in Gaul*, Amsterdam.
- Roymans, N., 1996: *From the sword to the plough*, Amsterdam.
- Roymans, N., 2004: *Ethnic identity and imperial power*, Amsterdam.
- Roymans, N. and J. Aarts, 2005: Coins, soldiers and the Batavian Hercules cult. Coin deposition at the sanctuary of Empel in the Lower Rhine region, in C. Haselgrove and D. Wigg-Wolf (eds), *Iron Age coinage and ritual practices*, Mainz am Rhein (Studien zur Fundmünzen der Antike 20), 337–60.
- Scheidel, W. and S. von Reden (eds), 2002: *The ancient economy*, Edinburgh.
- Scheid-Tissinier, E., 1994: *Les usages du don chez Homère. Vocabulaire et pratiques*, Nancy.
- Seaford, R., 2004: *Money and the early Greek mind*, Cambridge.
- Temin, P., 2001: A market economy in the early Roman Empire, *Journal of Roman studies* 91, 169–81.
- Theuvs, F. 2003: Exchange, religion, identity and central places in the early Middle Ages, *Archaeological dialogues* 10, 121–37.
- Thirion, M., 1967: *Les trésors monétaires gaulois et romains trouvés en Belgique*, Brussels (Cercle d'études numismatiques, travaux 3).
- Thompson, W.E., 1982: The Athenian entrepreneur, *L'Antiquité classique* 51, 53–85.
- Von Reden, S., 2002: Money in the ancient economy. A survey of recent research, *Klio* 84, 141–74.
- Von Reden, S., 2003: *Exchange in ancient Greece*, London.
- Vossen, I. 2003: The possibilities and limitations of demographic calculations in the Batavian area, in Th. Grünewald and S. Seibel (eds), *Kontinuität und Diskontinuität, Germania inferior am Beginn und am Ende der römische Herrschaft*, Berlin and New York, 414–35.

- Weiner, A.B., 1992: *Inalienable possessions. The paradox of keeping while giving*, Berkeley and Oxford.
- Wheeler, R.E.M. and T.V. Wheeler, 1932: *Report on the excavation of the prehistoric, Roman, and post-Roman site in Lydney Park, Gloucestershire*, Oxford (Reports of the Research Committee of the Society of Antiquaries of London IX).
- Wigg, D.G., 1999: The development of a monetary economy in N. Gaul in the late La Tène and early Roman periods, in J.D. Creighton and R.J.A. Wilson (eds), *Roman Germany. Studies in cultural interaction*, Portsmouth (JRA Supplementary Series 32), 99–124.
- Wilk, R.R., 1996: *Economies and cultures. Foundations of economic anthropology*, Oxford and Colorado.
- Wood, E.M., 1989: *Peasant-citizen and slave. The foundations of Athenian democracy*, London.
- Woolf, G., 1998: *Becoming Roman. The origins of provincial civilization in Gaul*, Cambridge.
- Zukav, G., 1979, *The dancing Wu-Li masters. An overview of the New Physics*, New York.